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New Schools for New Towns.
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Development of new concepts related to educational systems in new towns resulted from a two week concentrated idea session among architects, specialists from other fields, and students. Six teams were given programs by educators related to new towns and various educational goals. The resulting solutions reflected both the influence of new technologies and the integration of education into the community. Elements developed included--(1) the automobile and drive-in education, (2) the motorized and shoulder carrel, (3) the town brain, (4) education in the new town within the old town, and (5) education within the new town: 1990. Social-educational integrative concepts developed are--(1) the mainstream, (2) the open hand, (3) the tower of learning, and (4) education in the new town: 1970. Solutions are illustrated through sketches and diagrams. (MH)

School of Architecture, Rice University

NEW SCHOOLS FOR NEW TOWNS

EF002354

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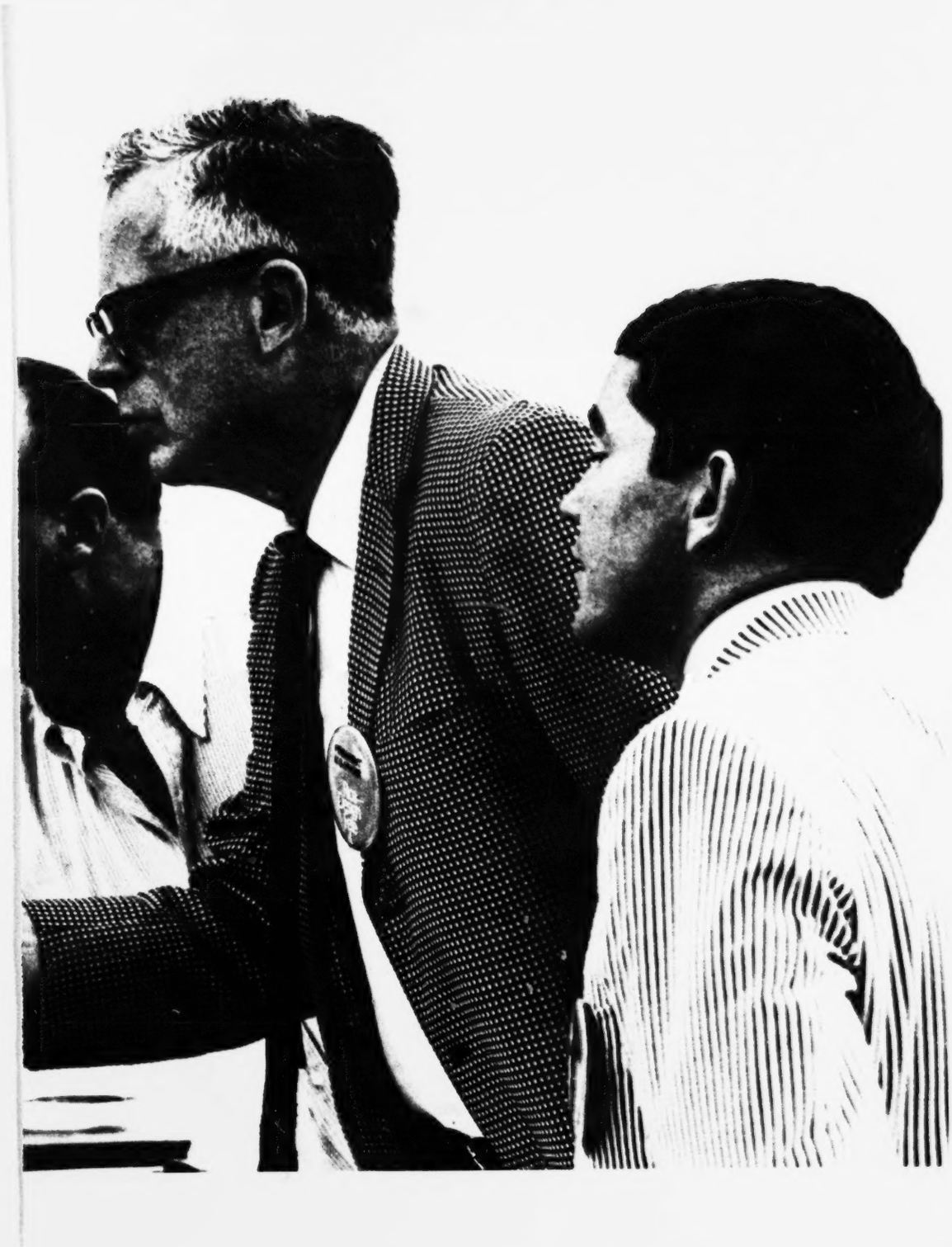
2 Table of Contents

4 Foreword

Technology
6 Introduction
9 The Automobile
10 Drive-In Education
12 The Motorized Carrel
14 The Shoulder Carrel
16 The Town Brain
17 Education in the New Town Within the Old Town
24 Education in the New Town: 1990

Intermix
34 Introduction
38 The Mainstream
42 The Open Hand
44 The Tower of Learning
46 Education in the New Town:1970

58 Conclusion



The Rice Design Fete is an arena for the exploration of new planning and architectural ideas. It brings together a group of practicing architects, specialists from other fields, and architectural students who during two weeks of concentrated effort try to develop new concepts. This year's Fete, "New Schools for New Towns," dealt with the opportunity that new towns present as laboratories for approaching educational and school building problems in better ways. Ideas are the proper business of a foundation and consequently EFL, concerned with research and development of new school building concepts,was pleased to join The School of Architecture at Rice University in organizing and financing this Design Fete.

Six teams, each headed by a practicing architect, were given programs for new towns and for their education systems. These programs were drawn up by professional educators specifically for the Fete and reflect different climatic, economic, geographic, and social conditions as well as the differing educational ideas of the various consultants. The programs range from the renewing of a town within an older city to the creation of a new town around a major university campus.

A project sponsored by Educational Facilities Laboratories, Inc.

Rice Design Fete IV Director: William Cannady, AIA, Architect

New towns have fewer traditions to bind them to convention, but none to date, either in the United States or in Europe, have been radical or even particularly venturesome or experimental in their educational planning. A new town presents an unmatched opportunity to explore new educational approaches and new ways of housing education without the constraints of continuity. If these approaches succeed, they can stimulate new school planning answers for older communities which may be more inhibited in seeking answers to their problems.

The work of the architects and educators who contributed to the Design Fete ranges from the possible to the exotic, but cutting through the differences in their work were two underlying themes:

1. While the influence of **technology** on education and school building is increasing, in the next few decades, this influence will explode. Technology will exert an influence on education out of all proportion to the influence it presently exerts. Indeed, one of the major issues with which education is now grappling is learning to use the existing technology of our society for building, for communications, and for serving its other purposes.

2. The schools cannot go it alone—the lines between education and life, like the chain link fences between the school and its community, are too sharp today. A new kind of **intermix** between education and the community is long overdue.

Design Fete participants showed surprisingly little Beaux Arts resistance to accepting, indeed, embracing the automobile, billboards, the transistor, and industrialized building systems. All the participants were more than ready to utilize contemporary technology and communication techniques to serve the public purposes of education.

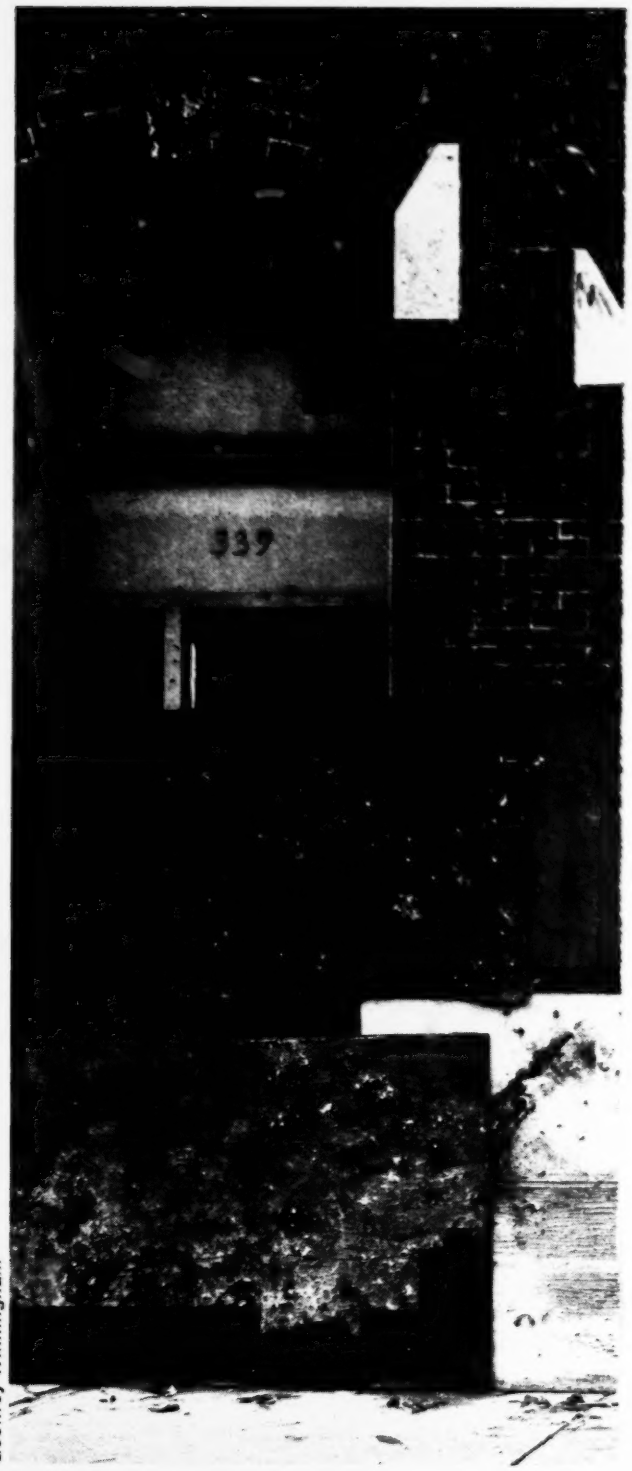
This report is an effort to communicate some of the concepts and some of the excitement of the Design Fete.

Educational Facilities Laboratories

"It may well be that what we have hitherto understood as architecture, and what we are beginning to understand of technology, are incompatible disciplines. The architect who proposes to run with technology knows now that he will be in fast company, and that in order to keep up he may have to discard his whole cultural load, including the professional garments by which he is recognized as an architect. If, on the other hand, he decides not to do this, he may find that a technological culture has decided to go on without him."

Reyner Banham [1]

1. Banham, Reyner. 1960. "Theory and Design in the First Machine Age." Frederick A. Praeger, New York.



Geoffrey Winningham

PASTOR
DIST. ELD
D. McCOLL

The educational programs which were developed in the Design Fete relied heavily upon technology as the basis for implementation. Whether utilizing existing technological refinements or looking to the future for probable advances and developments in technology, RDF IV architects and educators apparently felt more at ease than many of their contemporaries in harnessing technology to create new systems for education.

Their findings fall into three general areas:

1. Technology and Mobility
Mobility proved to be a major facet in developing new forms of education. Contemporary mobility has proved to be an enemy of most conventional school systems. Much concern was evidenced first, in the matter of *how* new town residents would travel from one place to another; and, second, in the matter of *what* the residents would be able to accomplish while commuting. Proposals for mobility in education range from an extension of the automobile and enlargement of our present understanding of its potential to completely automated, computerized personal mobile study carrels.

2. Technology in Pop Culture
Design Fete architects repudiated the traditional pristine architectural approach—which tends to be that of the classically beautiful building freestanding in a meticulously-landscaped park setting. Rather, their schemes attempted to inject meaning into existing elements of non-Utopian everyday life, pressing into service such elements as billboards, television, the automobile, the transistor radio, the computer, the parking lot, and the shopping center—all for the development of more meaningful education.

3. Technology and the Systems Approach
In some of the proposed new plans for education a systems approach is used, with the assemblage of many interdependent units of varying degrees of complexity to form a new instructional synthesis. The systems approach is made feasible by technology and electronics.

The individually-owned automobile, that bane of conventional planning, is here to stay—despite many urban planners' dreams of totally effective mass transit.

Many Design Fete solutions for new towns were related to the normal use of the automobile as it exists today, and as it will exist for the predictable future.

The architect-planners related their education systems to the automobile in the following ways:

1. Freeways gave automobiles easy accessibility to education facilities.

2. Large-scale billboards and advertising media on freeways directed drivers to educational facilities.

3. Facilities for learning were located whenever possible on freeway access roads, with parking areas immediately adjacent.

4. In planning for the future, automobiles were to be equipped with a series of "auto links"—radio, tape decks, telephones, television, and other devices—to make possible learning while commuting.

Design Fete architects who used the automobile as an implement for education emphasized that future facilities not accessible by automobile will not succeed, and that commuting time should become, whenever possible, learning time.

Architect Robert Venturi's concept is directly related to the normal use of the automobile—that which exists today. His plan includes:
The freeway for rapid accessibility.
Large scale billboards and advertising media to inform motorists where to get off.

Access roads to transport motorists to a parking lot directly in front of their destination.
Small-scale billboards and signs for further instruction and information.

This approach towards the private automobile suggests a new, fresh and pragmatic concept for urban planning and design.

Cedric Price proposed a system of Auto Links, which would consist of a range of equipment available for private hire or purchase from the Education Authority. This would include radio, TV, tape decks, telephones, and other devices. Price suggested that their use may be equated with education for safety.

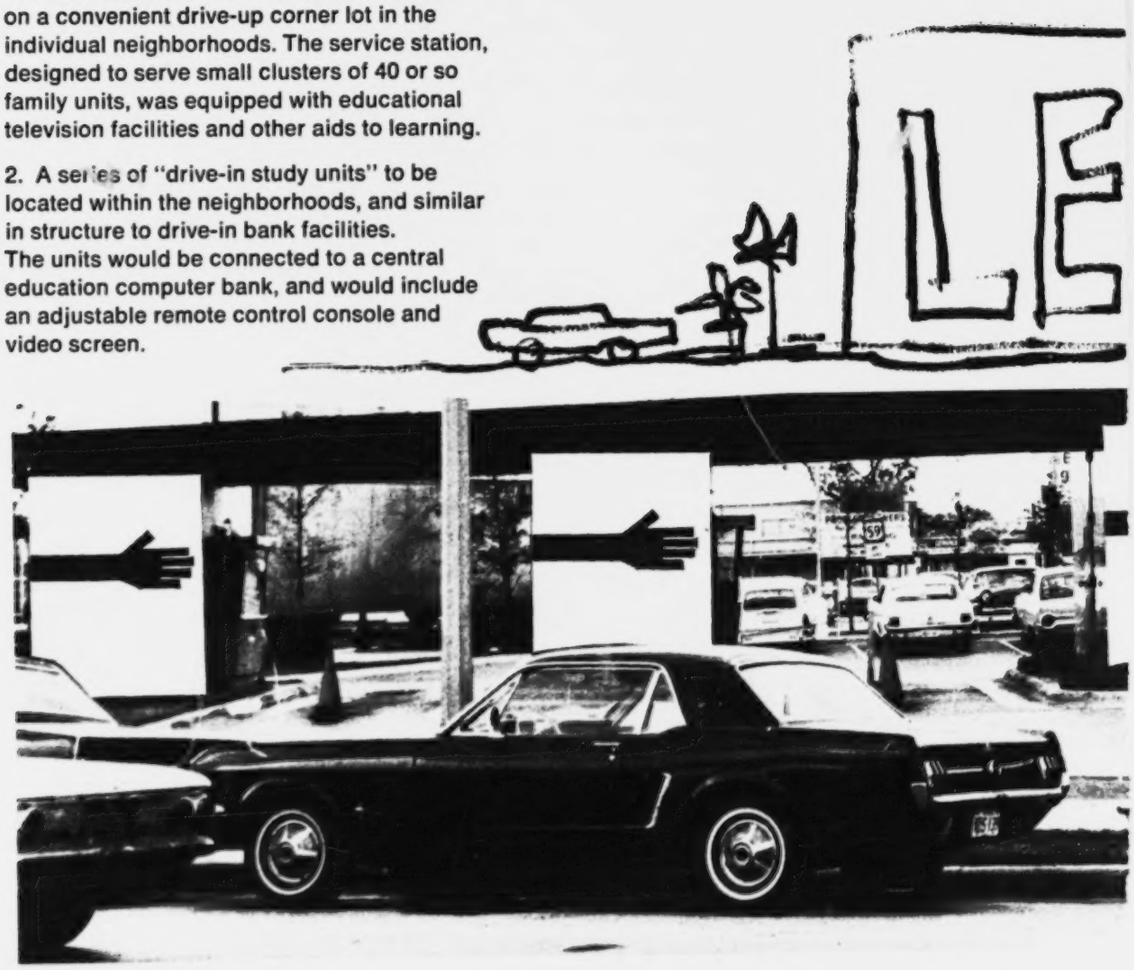
10 Technology/Drive-In Education

Because accessibility is one of the major determinants for survival of institutions in today's society, educators and planners would do well to apply the same criteria of accessibility to facilities for learning as shopping center developers apply to facilities for commerce.

The following facilities for learning emerged when the automobile was thus considered:

1. An educational "service station" located on a convenient drive-up corner lot in the individual neighborhoods. The service station, designed to serve small clusters of 40 or so family units, was equipped with educational television facilities and other aids to learning.

2. A series of "drive-in study units" to be located within the neighborhoods, and similar in structure to drive-in bank facilities. The units would be connected to a central education computer bank, and would include an adjustable remote control console and video screen.



Venturi's drive-in educational service station.

Vreeland's drive-in study unit

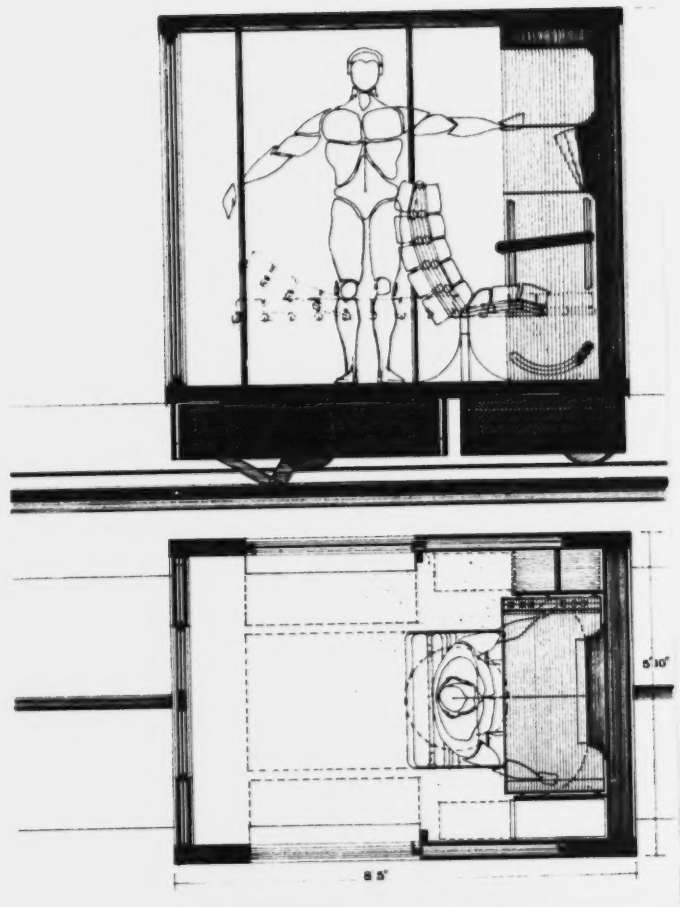
A mobile study carrel, controlled by computer and incorporated with a central system to form one aspect of the public transportation for a new town, was proposed by architect Paul Kennon.

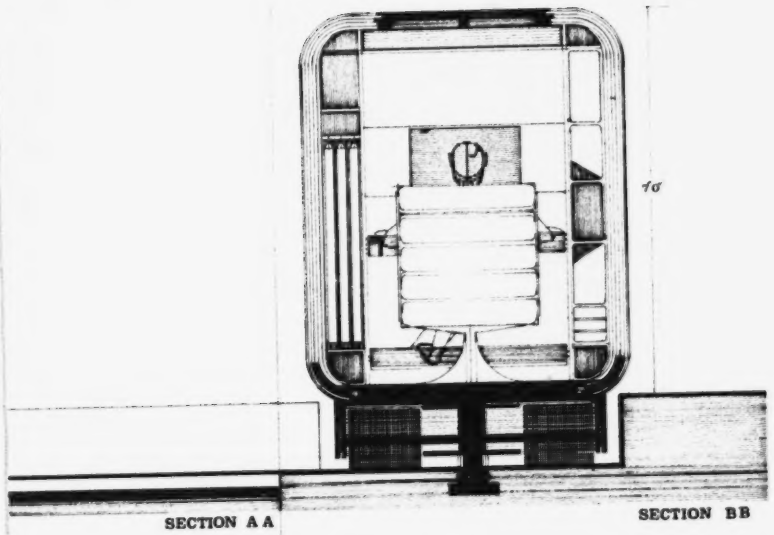
Each resident of a new town, from age three up, would be issued a motorized carrel.

These mobile units would dock at individual homes, plugging into specially designed outlets so that they would form extra study rooms at the home.

While in transit, the carrels would run along electrical tracks, and would require no attention from the occupant, once the destination was indicated. Thus, all commuting time could be study time, and the carrel would be equipped for individual study, data retrieval, thought, and rest. Because it is computerized, the carrel could also be programmed for trips to the Learning Resource Center, to the shopping center, and on other errands around the new town.

The Carrel Car is a proposal for the year 2000. American inventors and developers are now working to perfect electric vehicles whose speed, entry, and exit is controlled by the system. This type of transit system is expected to be in effect within the next 25 years, forming a new evolutionary step in urban transportation.

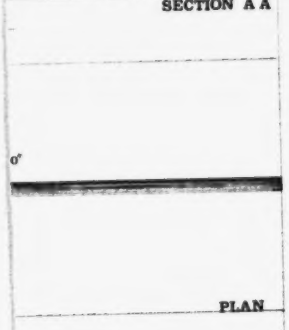




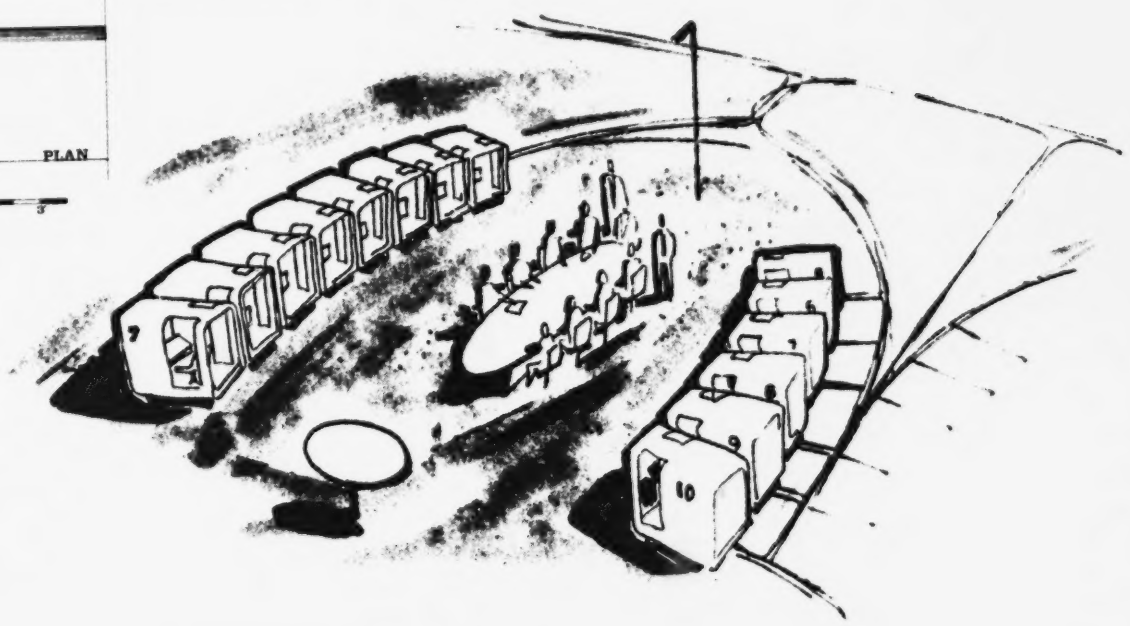
SECTION A A

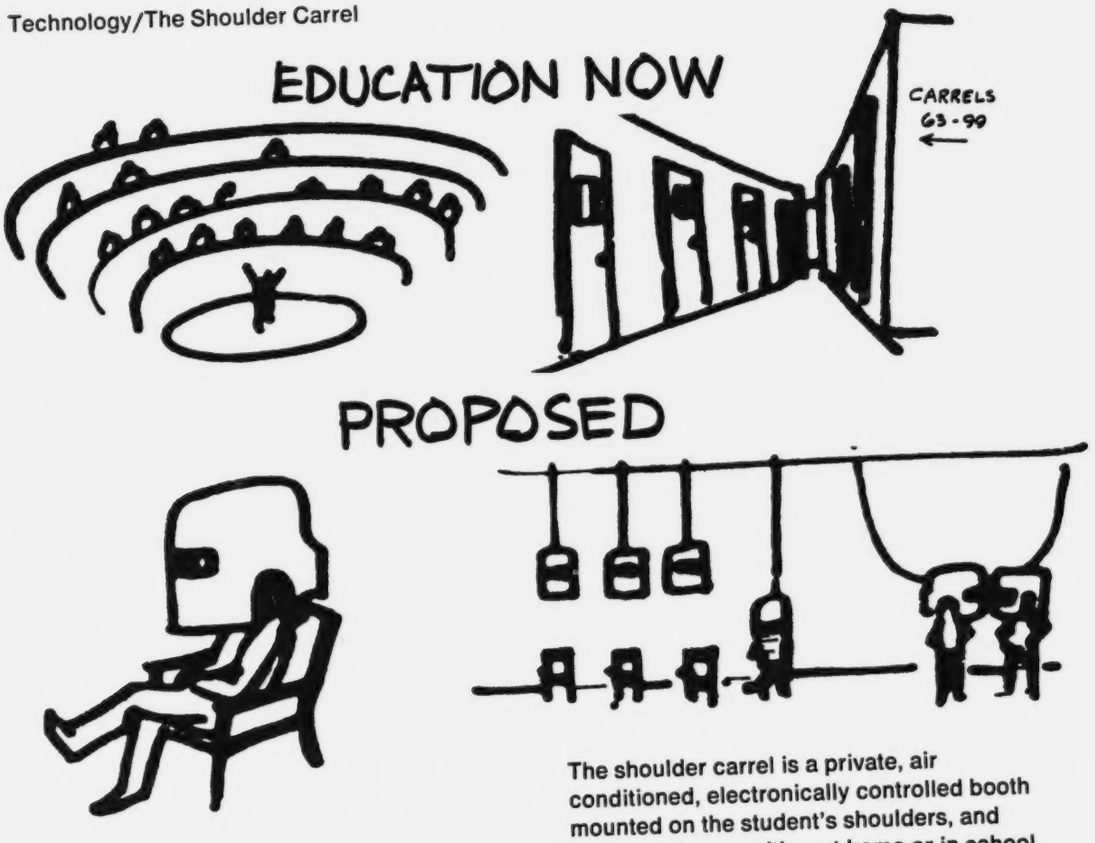
SECTION B B

The carrel unit, above, is designed for personal study, and is computer-directed for carefree transit. The unit is designed for one person and includes a chair which reclines to form a couch.



PLAN



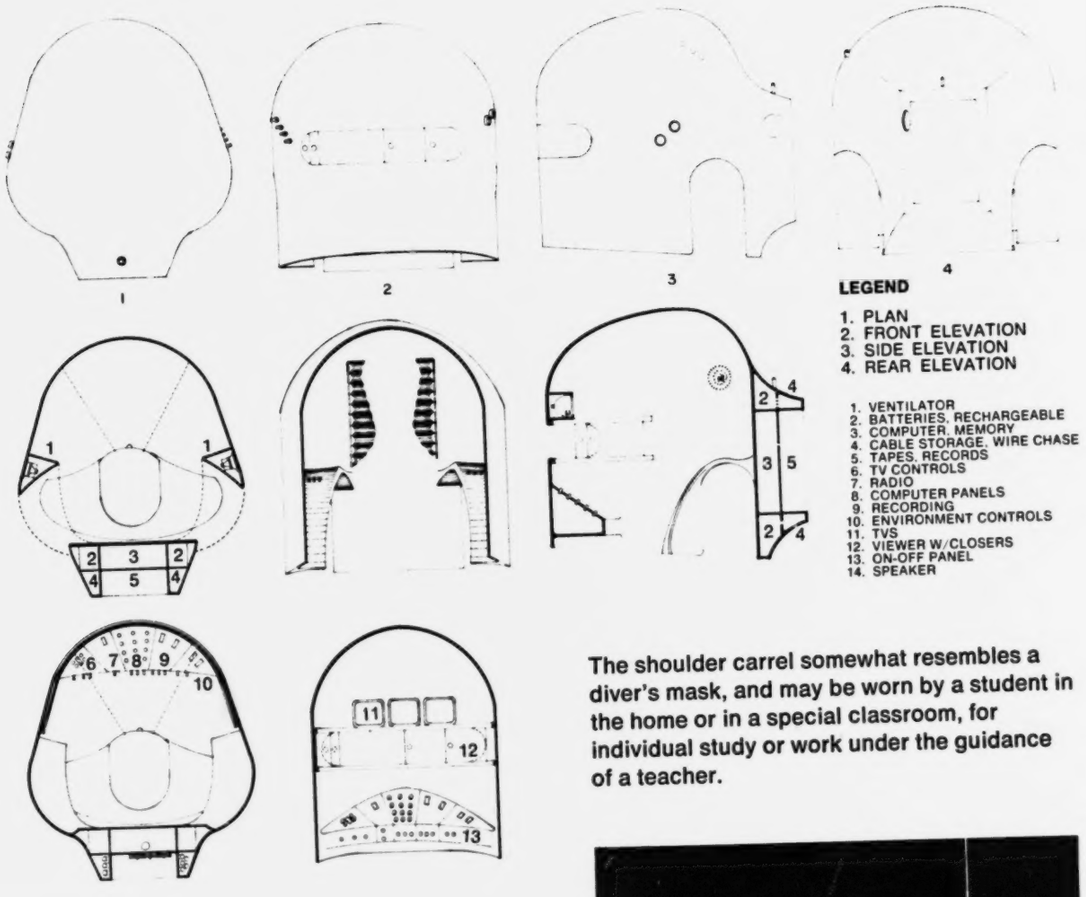


In this proposed view of education in a new town, residents assemble for individualized study in a group setting, wearing their shoulder carrels plugged into outlets incorporated in the structure of the schoolroom.

The shoulder carrel is a private, air conditioned, electronically controlled booth mounted on the student's shoulders, and designed for use either at home or in school. The carrel may be plugged into normal convenience outlets, and has its own short-term independent power supply as well.

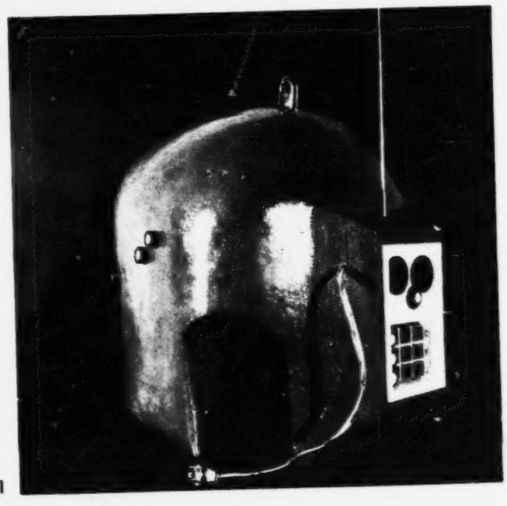
As designed by architect Charles Colbert to supplement teaching in a new town, the shoulder carrel brings to the student a vast library of data, electronically retrieved. With its individual instruction, the carrel is in direct competition and contrast with person-to-person teaching.

The carrel weighs about 20 pounds, and incorporates such instructional media as UHF-VHF TV, tapes, records, computer connections, two-way radio, telephone, slide projectors, and screens.



Detailed drawings of the shoulder carrel, above, show how this teaching aid, designed by architect Charles Colbert, incorporates mechanisms for electronic data retrieval with those for the comfort of the wearer.

The shoulder carrel somewhat resembles a diver's mask, and may be worn by a student in the home or in a special classroom, for individual study or work under the guidance of a teacher.



The Shoulder Carrel

Education which does not keep pace with advances in technology is not realizing its full potential—in an era in which man has achieved instant interchange of information between his earth and the moon.

With the development of telecommunication devices—systems for long-distance transmission, collection, and interchange of information, an education system may be formed which is independent of classrooms and lecture halls.

In planning an education program for the Rice Design Fete, educators John Tirrell and Albert Canfield proposed a Town Brain to transmit learning to town residents of all ages.

Under their plan even children under the age of three years would receive telemetered instruction transmitted from the Town Brain to receiving sets within the home. Portable "footlockers" of information for specific areas of learning would provide education in the home, at work and in shopping and play areas. The footlocker is comparable in some respects to the shoulder carrel discussed elsewhere—except that it is carried by the learner, rather than worn. The footlocker contains slides, tapes, and printed matter to supplement learning in specific areas. As one area of study is completed, the learner would check out another footlocker to cover another area of study.

Children ages 5 through 16 would study within the home, using the Town Brain as the source from which to retrieve information, and would continue to check out footlockers of material for study. Recreational time would be spent in cultural-recreational centers, and in specialized facilities in service centers and in industry.

The young adult through the age and learning level of the baccalaureate degree would also spend most of his time in study within the home. In addition, he would acquire skills for occupations and those for lifelong recreational activities in special centers outside the home.

In the Town Brain system, graduate study is undertaken at state universities. Employed adults receive continuing education programs in home study and educational center activity. The home console, which commands a vast library of information, instantly retrievable via the Town Brain, is the major influence and implement for education, from birth to death.

Home study through portable packages (footlockers or attache cases) of learning materials, two-way communication terminals or consoles at the household level, specialized facilities for occupationally related training in major institutions and service agencies, and the assistance of older groups in training younger ones—together provide the model of a generalized educational process necessary in these times of knowledge explosion, changing job requirements and world competition.

17 Technology/Education in the New Town Within the Old Town

Depressed areas of older cities may be tuned up and injected with new optimism and vigor when a dynamic education system instills new life into the community.

In depressed areas, educational attainment is generally low.

Distrust of established institutions is prevalent.

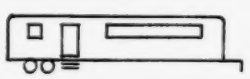
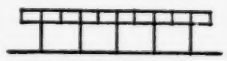
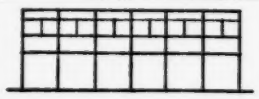
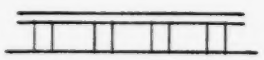
Apathy is a by-product of poverty.

Effective systems of education in such areas must reach out to the people in a friendly yet casual manner. The system must be placed within easy access of all residents, preferably within the individual neighborhoods, so that residents need incur no expense for transportation.

Architects suggest using the familiar, the available, and the commonplace to supplement formal structures for education. Whenever possible, existing elements should be utilized within the framework of the community, overcoming the usual obstacles of undue expense and long-term delays necessary for wide-spread use of sophisticated equipment, acquisition of land to provide sites for structures, and passage of bond issues to pay for the program.

Photographs on the following pages illustrate architect Thomas Vreeland's suggestions for the rehabilitation of a depressed area within a large city. His scheme involves the use of a familiar, easily identifiable symbol (in this case, the "Open Hand,") to identify even to the illiterate every component in his system. With the exception of the control center, the depository and media for airing all presentations, films, and tapes, all units are relatively inexpensive, easily available, and flexible enough to be moved as population shifts and as educational requirements for the community change.

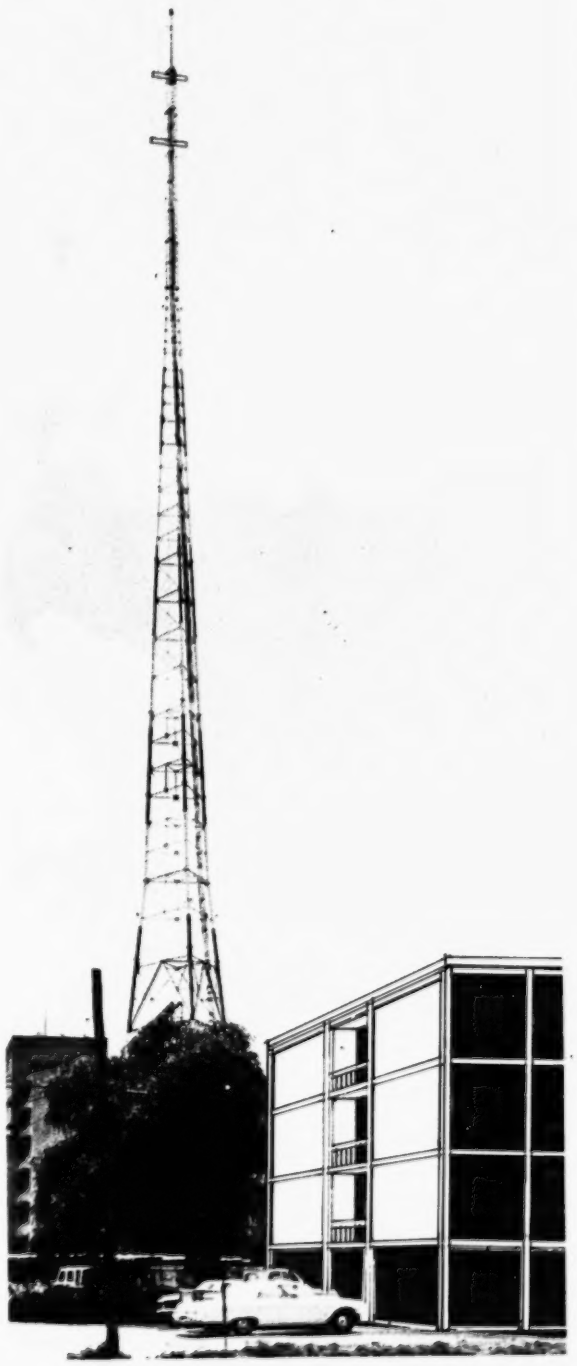
18 (Continuation) Technology/Education for the New Town Within the Old Town

COMPONENT	NOMENCLATURE
	individual hand-carried unit
	individual study unit, mark 1
	individual study unit, mark 2
	portable conference unit
	mobile teaching unit
	child care center
	prefabricated home center
	prefabricated adult learning center
	drive-in study unit
	voc-tec shop
	control

The chart above illustrates types and quantities of elements to be utilized for facilities for new education methods in a depressed area of 50,000 inhabitants living within the confines of a large urban area. Emphasis is placed on building a system from easily obtainable items, including transistor radios and convoys of VW traveling schoolrooms, to supplement the information beamed by the central heat control system.

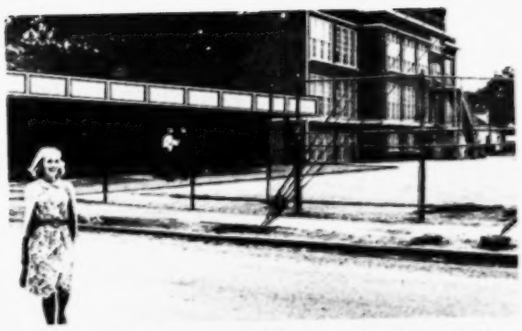
DESCRIPTION	QUANTITY	UNIT COST	TOTAL COST
battery-powered, transistorized radio receiver only	7500	1	7,500
cable-connected to central computer bank remote-control console, video screen, card and tape reader soundproof, lightweight, transportable enclosure	300	2000	600,000
identical to mark 1 except for weatherproof enclosure	450	2500	1,275,000
aluminum weatherproof construction 16' diameter, lightweight cylinder, transportable fixed center-pedestal table,15 seats, blackboard	300	500	150,000
motorized truck equipped to project pre-recorded video-tape programs driver operated	100	3000	300,000
12 'x 60' mobile home body tandem-coupled side by side, forms 24' x 60' instructional space can also be used singly	154	5000	770,000
SCSD school construction system, fully demountable integrated lighting, ceiling, thermal control and partition systems complete with fixed equipment	300,000 s.f.	18/ s.f.	5,400,000
Roux-Dorlut incremental, multi-story building system walls, floor and ceiling factory assembled into transportable cell 1,200,000 s.f. constructed space: 960,000 s.f. residential; 140,000 s.f. commercial; 100,000 s.f. educational	100,000 s.f.	8/ s.f.	800,000
cable connected to central computer bank adjustable remote control console, video screen treadle operated	50	1500	75,000
Mes-Tex pre-engineered building system steel rigid frame, galvanized steel ribbed roof and wall panels shed only (shop equipment supplied by sponsoring industry)	125,000 s.f.	4/ s.f.	500,000
central computer bank monitoring and programming center	1	10,000,000	10,000,000
		PROJECT COST	19,877,500

20 (Continuation) Technology/Education for the New Town Within the Old Town



A giant "brain" is proposed to feed information to residents of the depressed area. Through the central tower, left, information is fed to the public via transistor radios, telephone-booth type learning units, closed circuit television in classrooms, and closed-circuit screens in traveling school buses which take learning to the neighborhoods. The "brain" is estimated to cost approximately $10,000,000 to construct, but other elements in the scheme are most economical. The brain is expected to free many teachers from routine classroom duties so that they may participate in individual tutorials. In the photograph at right, technicians within the "brain" beam information to hundreds of outlets within the community.

The portable conference unit is designed to occupy a minimal amount of space, and is easily transported from one small site to another, as need directs. The unit is intended as a gathering place for all residents, housewives, teens, working men, and small children. Its purpose is to provide a meeting place for the interchange of ideas.



It is intended that components in the Vreeland scheme for a depressed area supplement existing school structures, which will still be utilized (above). Components in the plan were selected with feasibility and economy as the chief considerations.

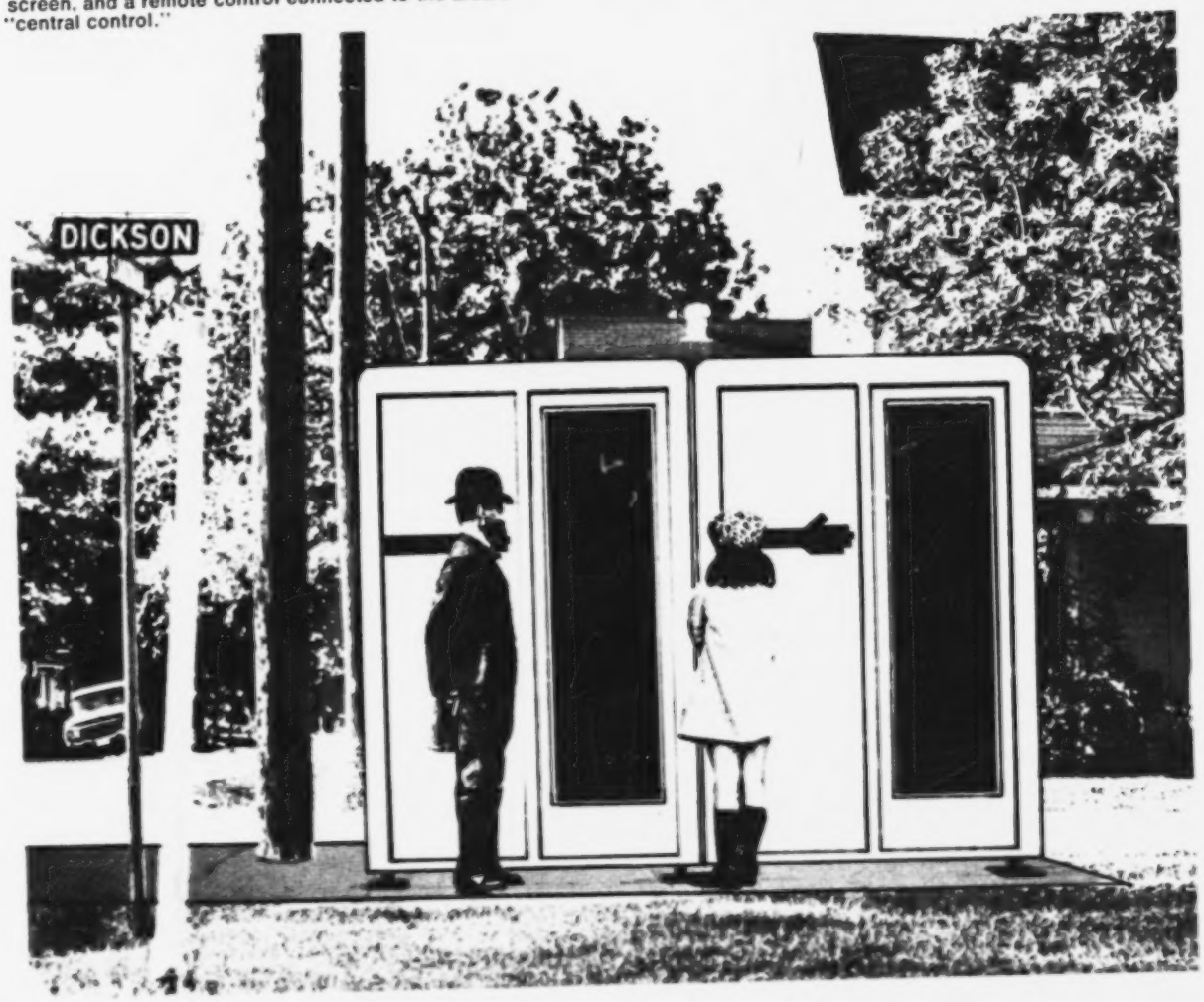
Architect Vreeland's scheme utilizes a modified version of the school bus; however, instead of transporting students to education facilities, the bus brings education to children in their own neighborhoods.

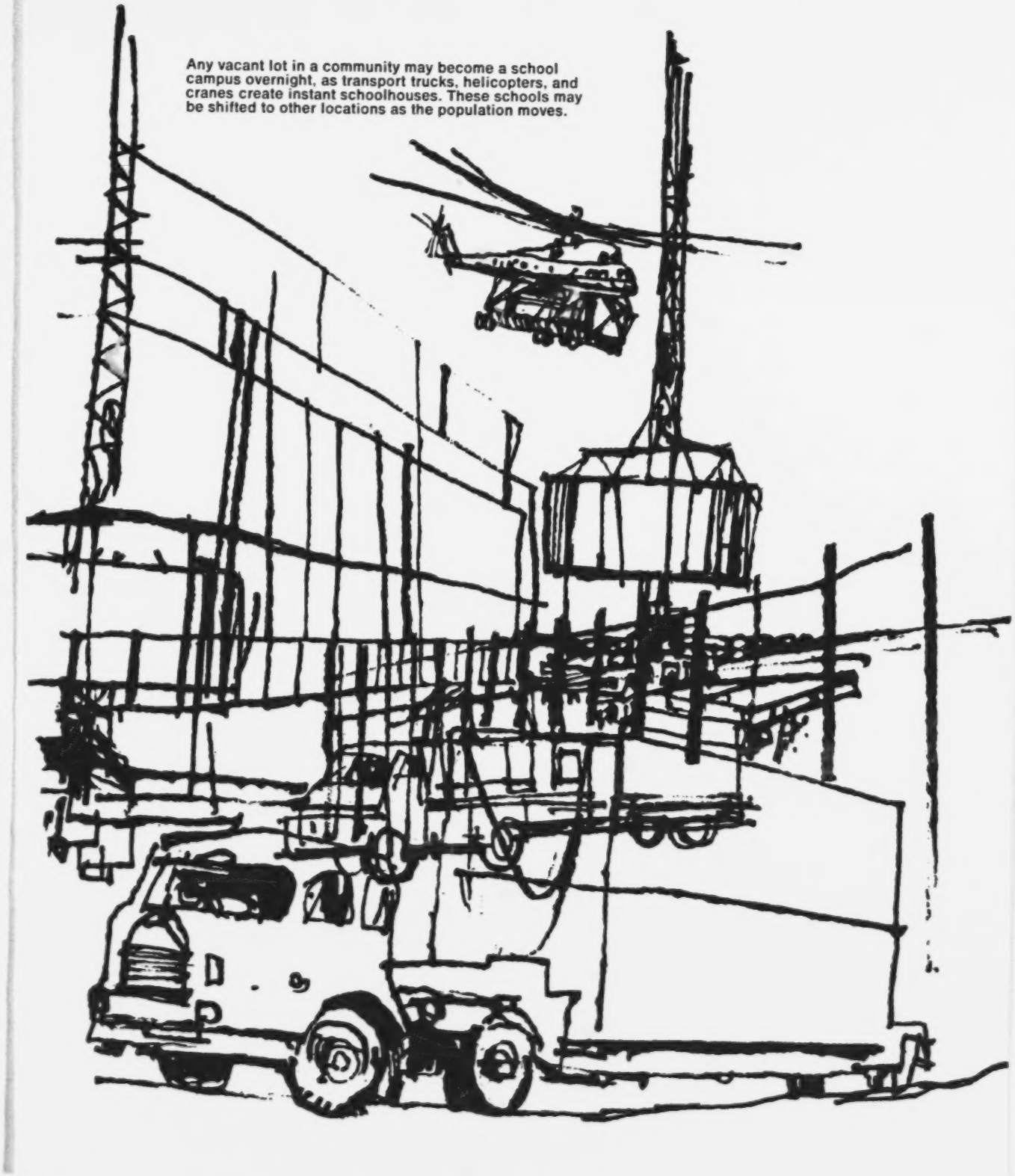
The school system maintains a convoy of roving, electronically equipped and programmed buses, similar to the Volkswagen bus. As the familiar traveling ice cream conveyor seeks its customers, the proposed school bus seeks its learners in a Pied Piper fashion.

22 (Continuation) Technology/Education for the New Town Within the Old Town

The smallest unit in the Vreeland scheme is a transistor radio which pre-schoolers will use to receive information from central control. The one-program radio is to be given to each pre-schooler in the community, or sold at cost. Other commonplace artifacts to be pressed into service in the scheme include drive-ins, converted to information centers, vending machines, corner telephone booths, and portable buildings.

This education unit is modeled after a telephone booth, and can be manufactured for about $2500. Some 750 units would be utilized in the depressed community of about 50,000 persons, and would be placed on street corners directly in the neighborhoods so that the residents could use them for information retrieval and programmed presentations. Within the booth are a seat, a video screen, and a remote control connected to the area's "central control."





Any vacant lot in a community may become a school campus overnight, as transport trucks, helicopters, and cranes create instant schoolhouses. These schools may be shifted to other locations as the population moves.

Architect Cedric Price placed maximum emphasis on electronic technology as he amassed a Kit of Parts for a decentralized education system, based on John Tirrell and Albert Canfield's educational program for a projected new town which will be feasible by the year 1990.

The parts form a complex network of facilities for education, most of which are non-structural, and are incorporated into existing facets of urban areas.

The suggested Kit of Parts is as follows:

(TB) THE TOWN BRAIN Central production and servicing for Educational Facilities (EF)

(IESC) INDUSTRIAL/EDUCATIONAL SHOWCASE Displays to explain industry to the public.

(CESC) COMMERCIAL/EDUCATIONAL SHOWCASE Displays and Information related to normal shopping facilities, together with tuned-up Post Office, Banking, etc. Services are often dispensed in self-service machinery.

(AL) AUTO LINK Education facilities are made available to private cars with radio, two-way telephones, and charts.

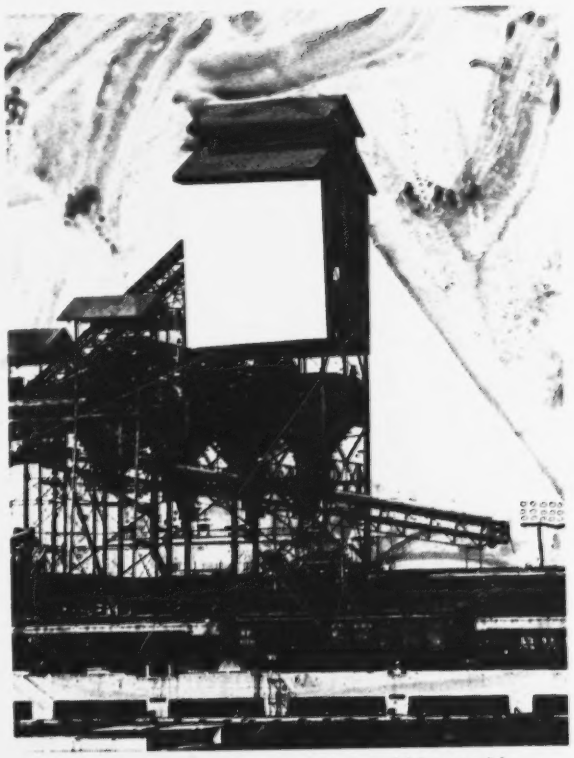
(RTS) RAPID TRANSIT SERVICING Education facilities in buses, trains, etc., including informational panels.

(HSS) HOME STUDY STATION is a major element placed within existing homes, or added to them, to permit the home to replace the schoolhouse for most educational communication.

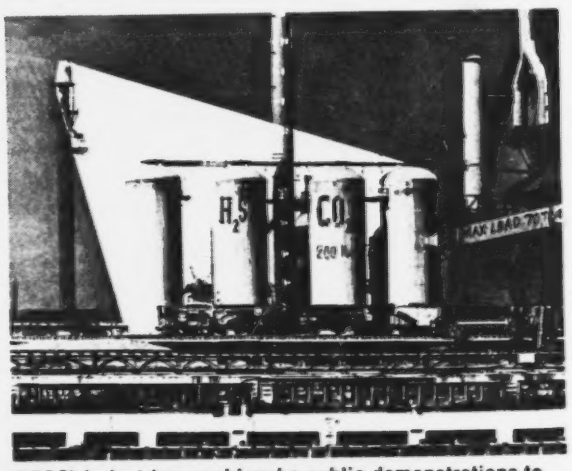
(ITT) INFANT TEACH TOY A portable elementary school, easily relocated to serve a shifting age group.

(OAS) OPEN AIR SERVICING Enables additional educational feeds from movies and television, presented in public parks.

(LC) LIFE CONDITIONER The Life Conditioner Box and the Life Conditioner Tent both contain learning facilities.



(IESC) External projection screens would be used in Cedric Price's plan for a new town, and industry would itself serve as an instrument of education by explaining on the screens its processes and products.



(IESC) Industries would make public demonstrations to reinforce the lessons learned from telemetered material. Above, a chemical plant spells out its operations for every passerby.

Self-contained vending machines.

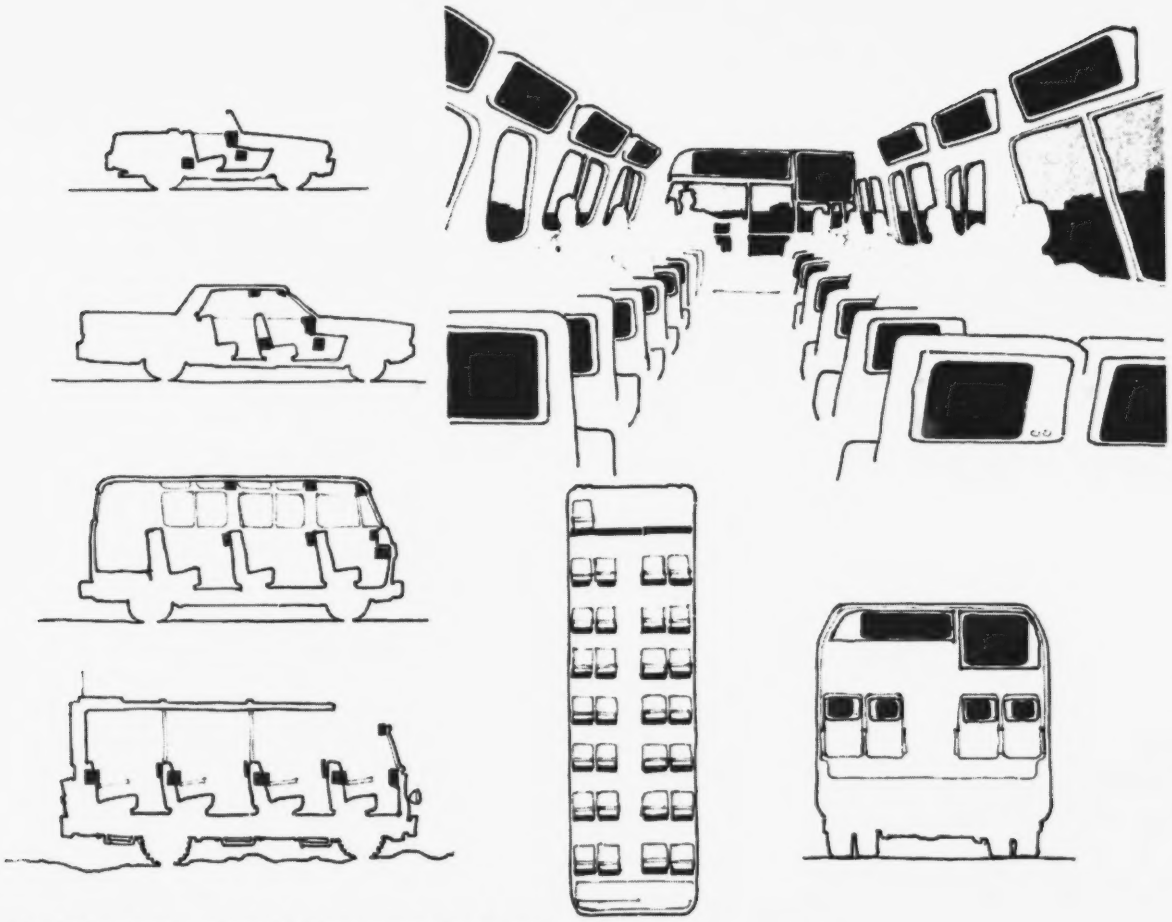
(CESC) Equipment required to tune up existing commercial properties:

Mechanical plant-lifts, jacks, small cranes etc., capable of supporting and displaying goods not normally available for inspection.

Portable show cases, stands, etc.

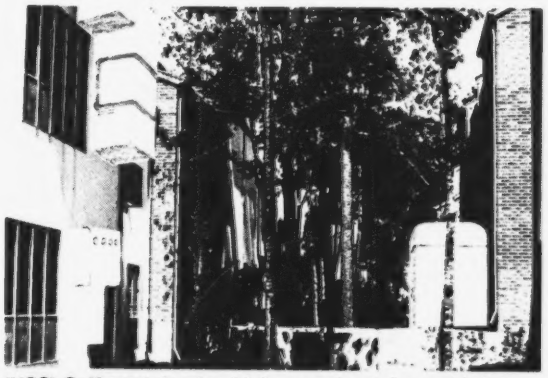
System of lightweight variable shelters with localized heating and lighting capable of providing links between individual stores—a citizens' arcade.

Citizens' Arcade

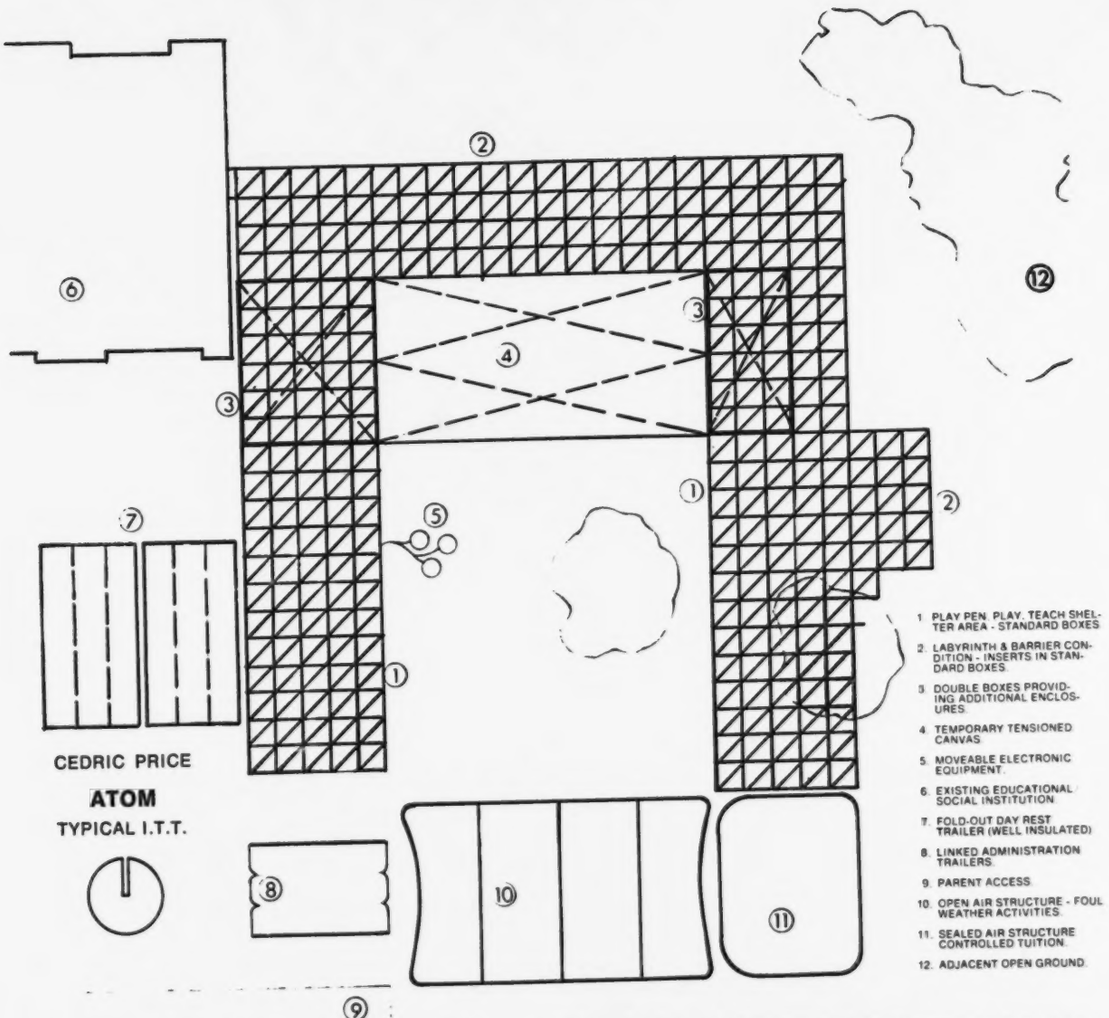


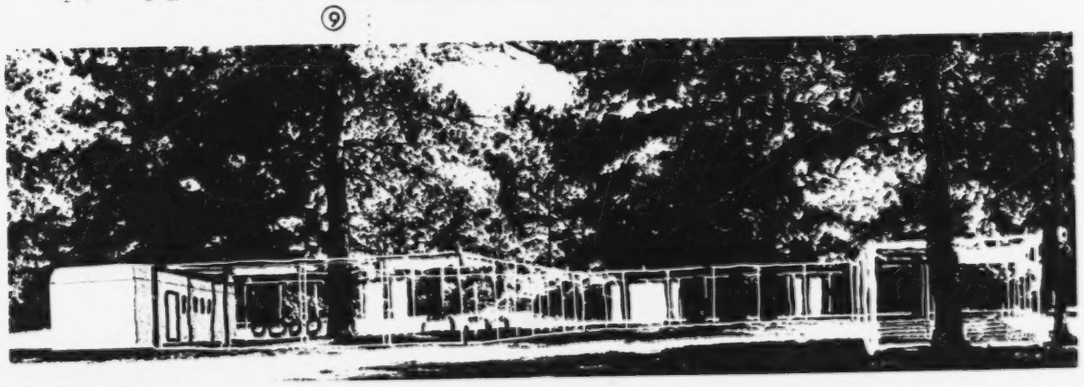
(RTS) Backs of seats become miniature carrels for study aboard vehicles,so that the commuting time of the student is not wasted.

(RTS) Each vehicle would include a chart showing its location within the total transportation system.



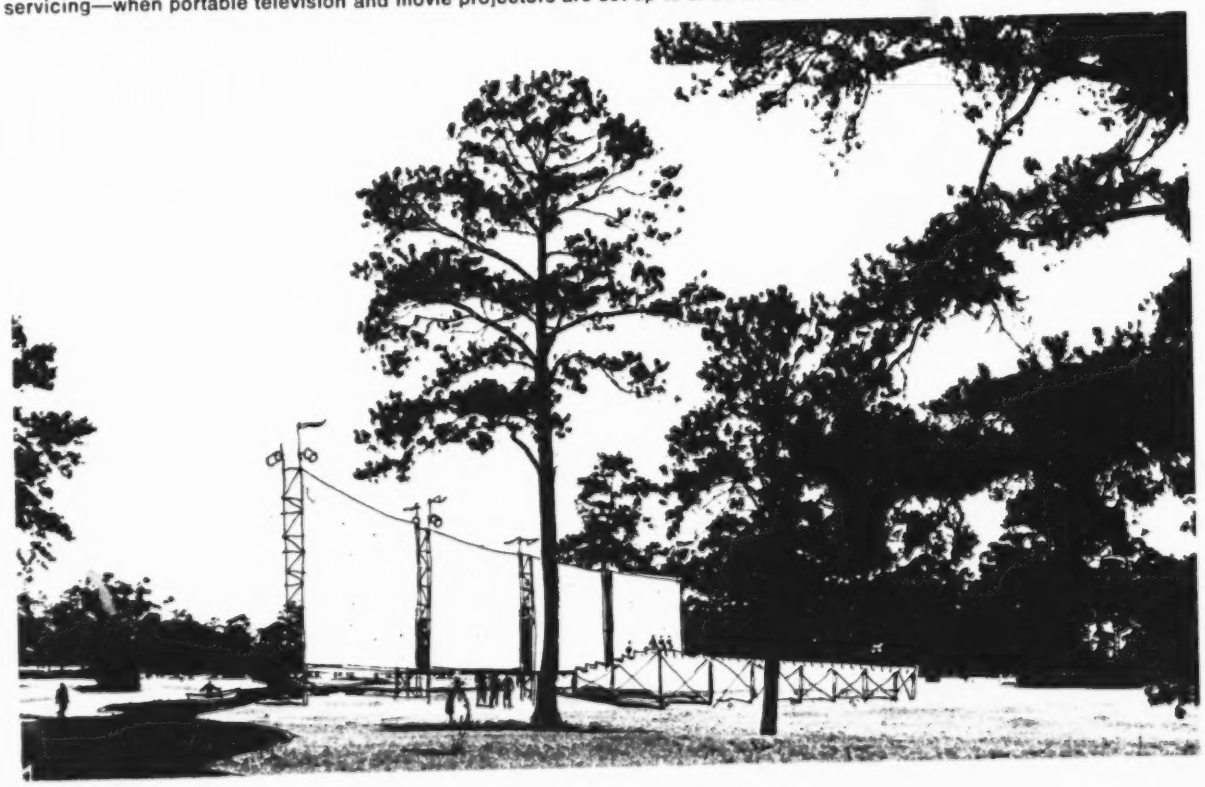
(HSS) Self-contained cubicles can be "plugged in" to existing housing. Each cubicle would contain electronic equipment similar to that used in the Carrel Car and the Shoulder Carrel.


CEDRIC PRICE
ATOM
TYPICAL I.T.T.
1. PLAY PEN, PLAY, TEACH SHELTER AREA - STANDARD BOXES.
2. LABYRINTH & BARRIER CONDITION - INSERTS IN STANDARD BOXES.
3. DOUBLE BOXES PROVIDING ADDITIONAL ENCLOSURES.
4. TEMPORARY TENSIONED CANVAS.
5. MOVEABLE ELECTRONIC EQUIPMENT.
6. EXISTING EDUCATIONAL SOCIAL INSTITUTION.
7. FOLD-OUT DAY REST TRAILER (WELL INSULATED)
8. LINKED ADMINISTRATION TRAILERS.
9. PARENT ACCESS.
10. OPEN AIR STRUCTURE - FOUL WEATHER ACTIVITIES.
11. SEALED AIR STRUCTURE CONTROLLED TUITION.
12. ADJACENT OPEN GROUND.

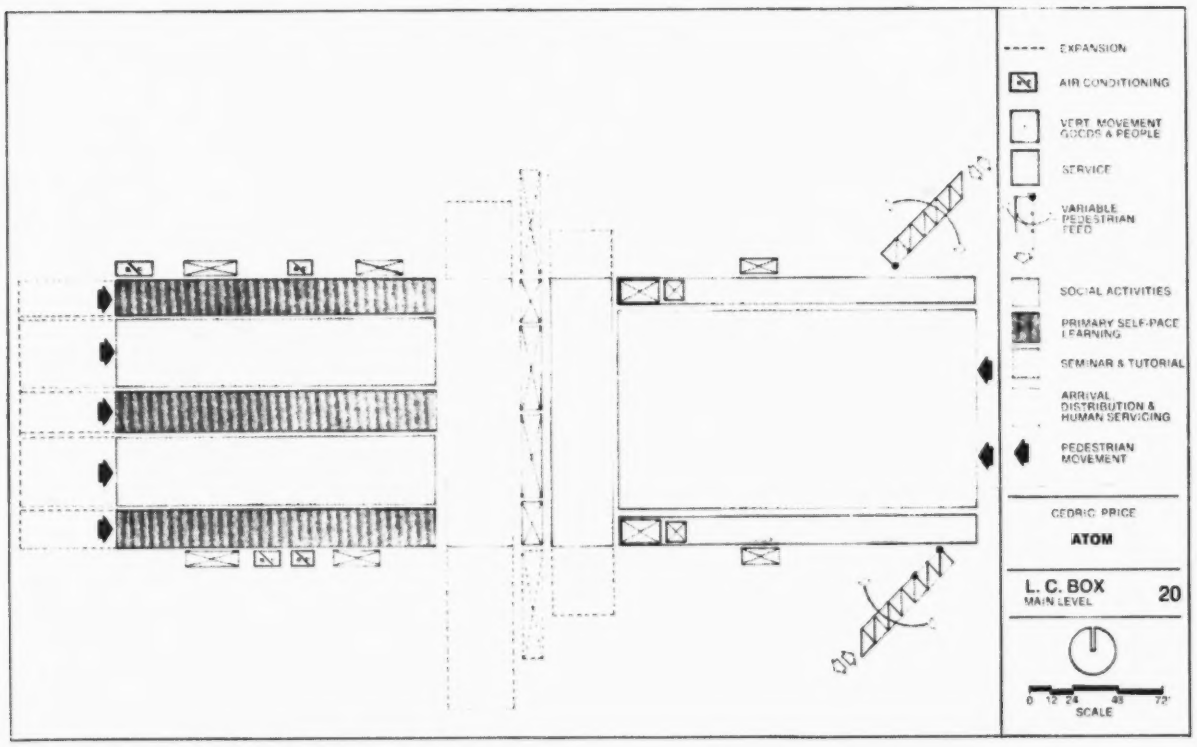


Infant Teach Toy

(OAS) Public parks can become giant arenas for education—architect Cedric Price calls this innovation OAS, or open-air servicing—when portable television and movie projectors are set up to show educational and recreational material.



(LC) The Life Conditioner Box straddling the expressway.



The structure of the LC Box is of three types:

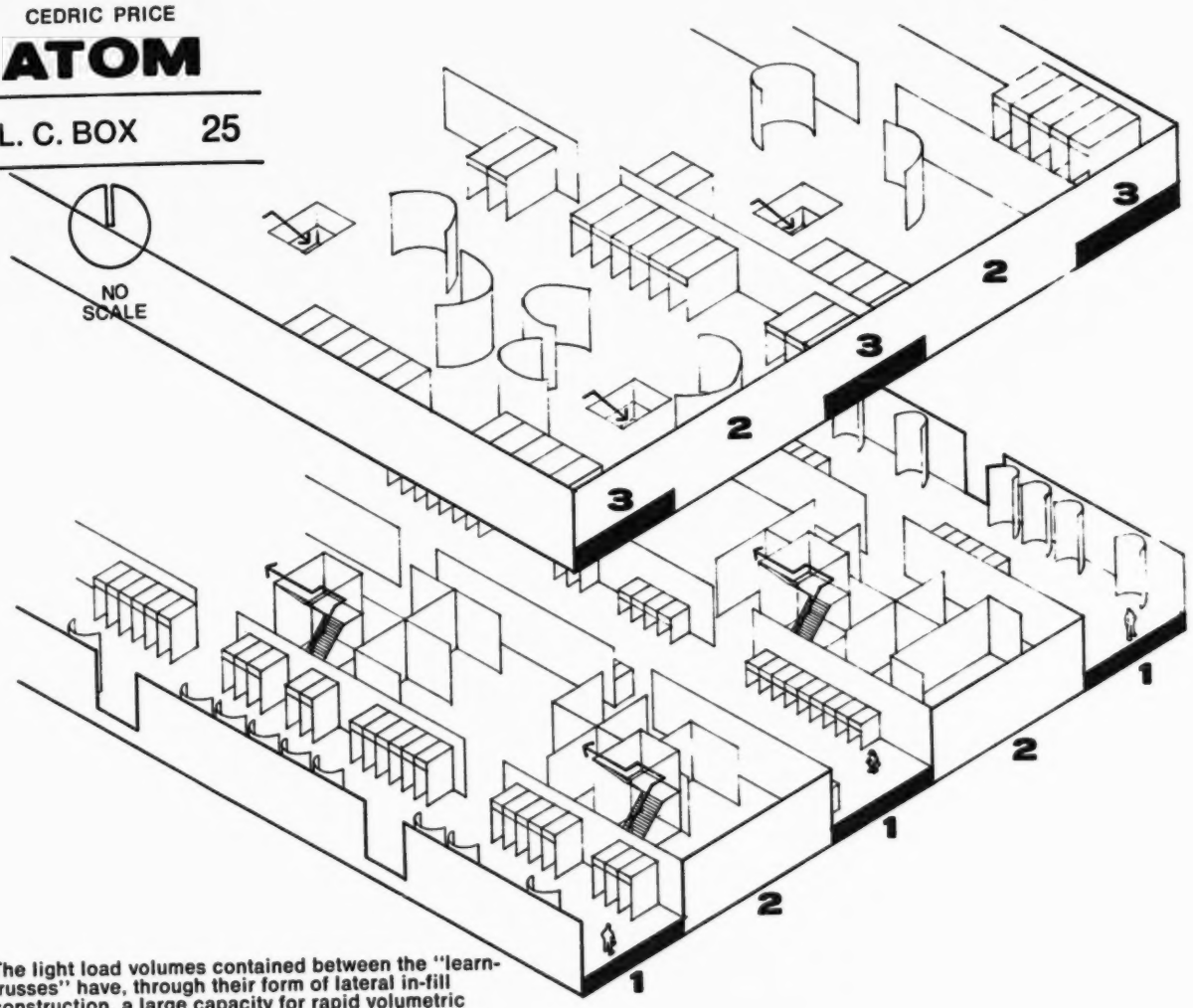
1. The small cell concentrated Educational Facility which consists of the three extendable double decker steel trusses with infill volumes capable of foundations on sloping ground.
2. The central access and cross-feed area which is of varied structure dependent on the siting of the box and is likely to consist of a continuous loadbearing reinforced concrete construction.
3. The large variable volume section which is framed steel construction with simple footings.

CEDRIC PRICE

ATOM

L. C. BOX 25

NO SCALE

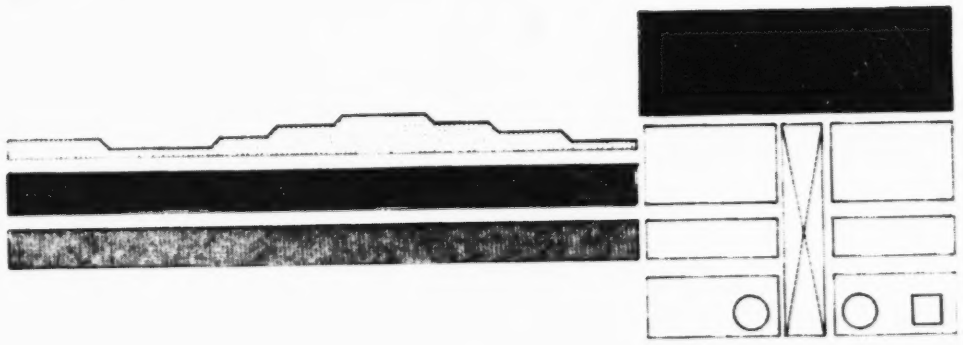


The light load volumes contained between the "learn-trusses" have, through their form of lateral in-fill construction, a large capacity for rapid volumetric variation combined with the availability of variable vertical links (staircases).

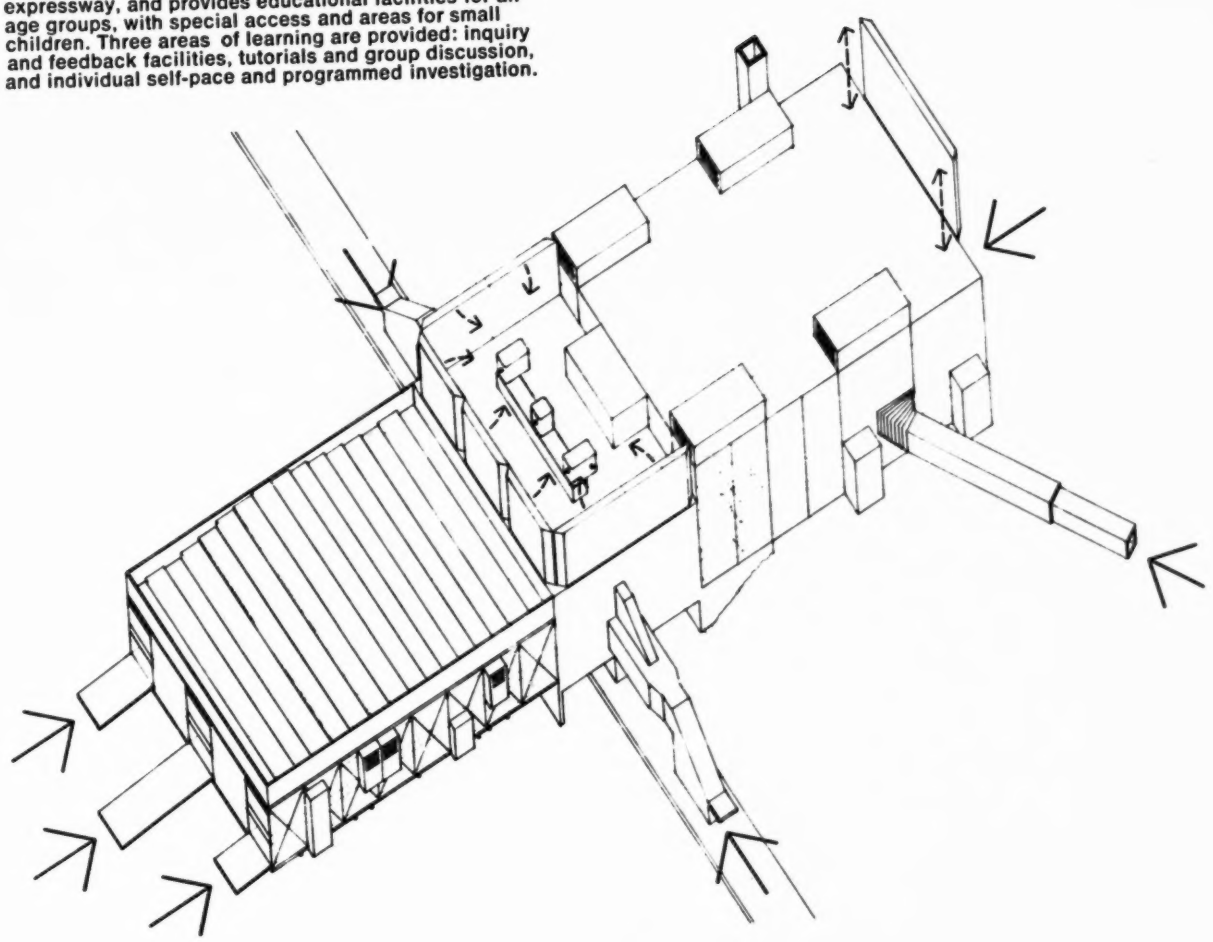
CEDRIC PRICE

ATOM

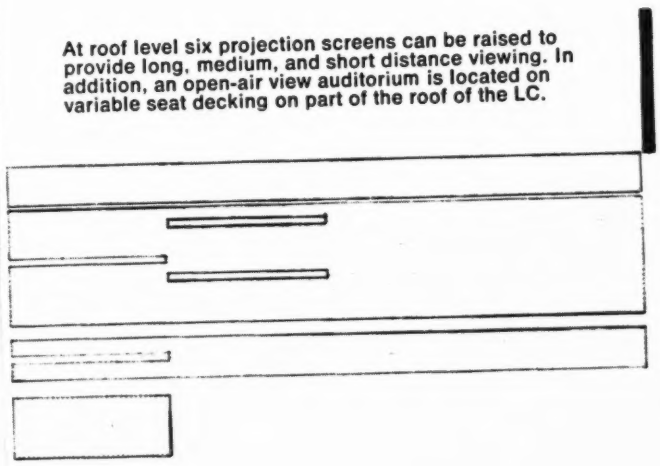
L. C. BOX 23
LONG SECTION



Cedric Price's Life Conditioner Box is a major component in his Kit of Parts for education. The box straddles the expressway, and provides educational facilities for all age groups, with special access and areas for small children. Three areas of learning are provided: inquiry and feedback facilities, tutorials and group discussion, and individual self-pace and programmed investigation.



At roof level six projection screens can be raised to provide long, medium, and short distance viewing. In addition, an open-air view auditorium is located on variable seat decking on part of the roof of the LC.



SOCIAL ACTIVITIES

VIEWING SCREENS

SERVICE AREA

ARRIVAL/ DISTRIBUTION & HUMAN SERVICING

OUTDOOR AMPHITHEATER

INTENSIVE LEARNING

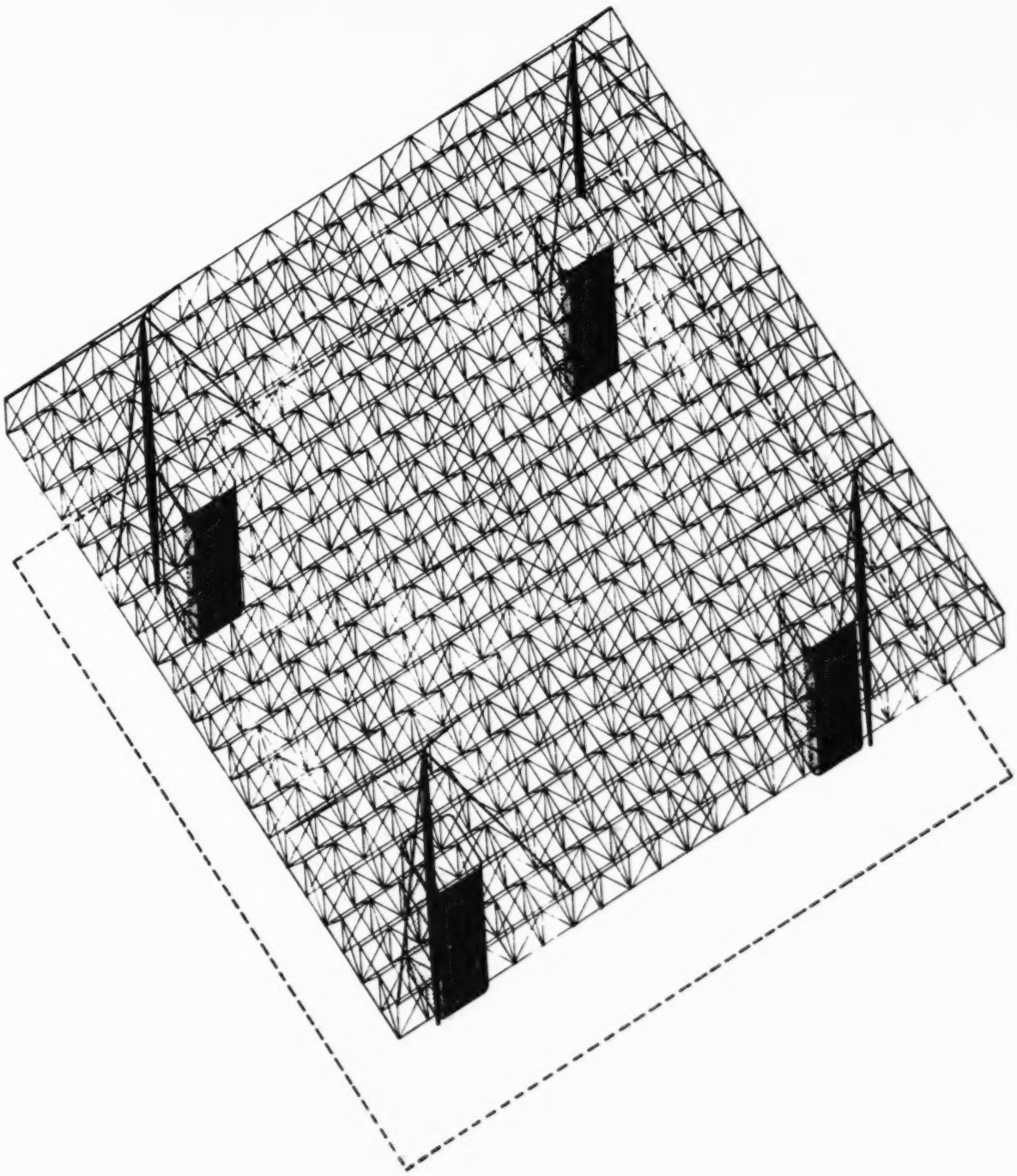
PRIMARY SELF-PACE LEARNING

R.T.S.

FREIGHT DELIVERY

VERTICAL MOVEMENT GOODS & PEOPLE

32 (Continuation) Technology/Education in the New Town: 1990



LC Tent consists of a 16′ x 16′ x 16′ unit space frame 336′ x 336′ and is suspended from four steel posts with a clear height of 60′

Partial foul weather protection is provided by means of sky-blinds fixed to the space deck.

Four service and media towers are sited against each of the supporting posts. The ground deck, as it carries little or no piped services can be of varied levels. Services from the towers are threaded through the space deck as required by the short-medium life enclosures below. The enclosures are built and demolished as required and provide facilities for workshops. A small experimental auditorium and the sort of anonymous, well-serviced volume of spaces that will become increasingly required by the local community (10,000-20,000) are included.

At first it is envisioned that one LC Box and one LC Tent will be required by each group of 20,000 citizens. At later phases the relative number of LC Tents will increase.

Price, in explaining his plans for this new town says,
"The concept of a finite town totally conceived at a single moment in time is considered both intellectually derelict and socially irresponsible.

Such a concept in the past may well have produced a settlement capable of defense but in recent times has produced little more than medieval piles capable of only the most limited pre-ordained growth and change.

Increased individual mobility and personal independence enables an extension of the range of self-choice activities open to all.

Mobility of labor and the rapid spread of invisible servicing (e.g. water, Medicare, TV, gas, credit cards, wired power) are additional generators of an increasingly fragmented—both spatially and in time—society.

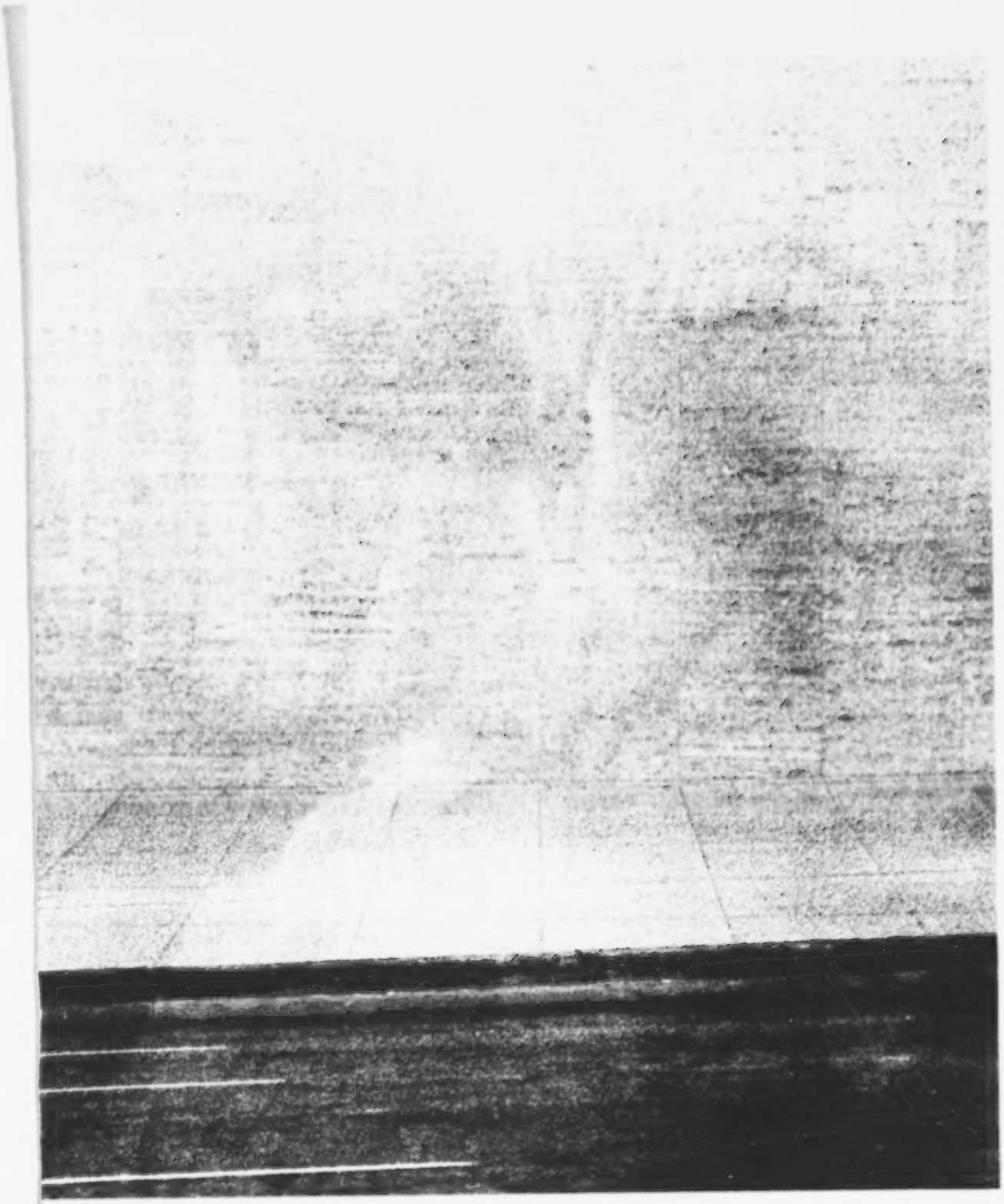
The built environment is likely to become an increasingly restrictive and abrasive content of total life if continuing attention is paid by the administrators and their consultants (architects, planners, and romantic social scientists) to its assumed permanence rather than to its shortening socially relevant life.

Too often, the consultants grasp desperately at some generally acceptable activity that can be located in "buildings" and thereby justify an urbanistic structuring and communication theory based on the assumption that "growth" (i.e. socially healthy activities) is most likely to provide a locationally static "fix" around which the town can grow indicating in such growth physical infra-structuring caused by such healthy activities. Architecture should realize its immense potential to demand its own technology rather than stand at the end of the "spin-off" queue with the ever-open hand. The provision of educational facilities, in physical terms, should not be tailored to any particular requirements made by any particular authority.

Rather, such provision should enable a range of educational patterning to evolve which is wider than previously possible. In architectural and planning terms, this requires an avoidance of the providing of a single or comprehensive physical dispenser unit."

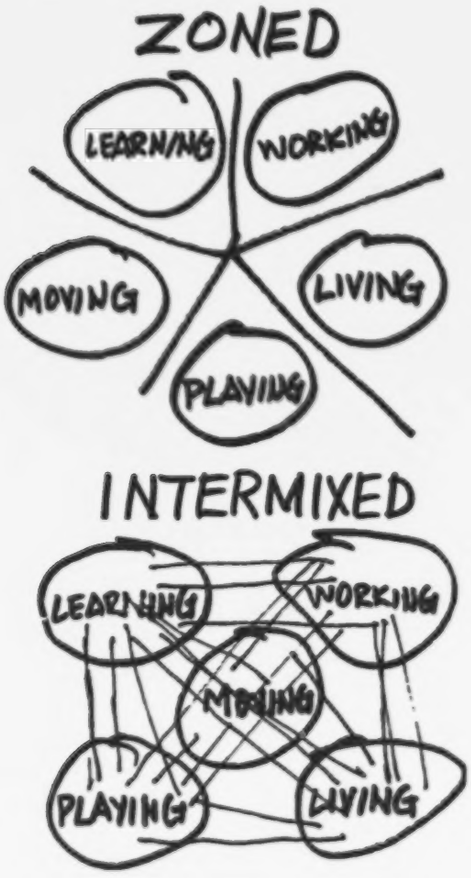
"Most present-day schools may be lavishing vast and increasing amounts of energy preparing students for a world that no longer exists."
Marshall McLuhan

Gerry Moorhead



Architects and educators participating in the Design Fete repudiated the accepted practice of isolating facilities for education from others in the community. Rather, they created an INTERMIX of education with working, living, playing, and moving from one activity to another.

Intermix is the result of erasing the borders which zone learning into schools. A grand Intermix of education and every other facet of daily life creates vitality, excitement, convenience, involvement, and exchange of benefits.



The statement of A. E. Parr which follows and which Robert Venturi quoted at the Design Fete illustrates why intermix is an important concept for planning and education. Intermix establishes a fresh and clear direction for planning educational facilities in new towns and perhaps in older towns as well.

"A brief recollection of certain urban experiences of a child born when the century was born.

Until I reached the age of five we lived a short commuter distance outside of a town of about 75,000 on the west coast of Norway. Not as a chore, but as an eagerly desired pleasure, I was fairly regularly entrusted with the task of buying fish and bringing it home alone. This involved the following: walking to the station in five to ten minutes; buying ticket; watching train with coal-burning steam locomotive pull in; boarding train; riding across long bridge over shallows separating small-boat harbor (on the right) from ship's harbor (on the left), including small naval base with torpedo boats; continuing through a tunnel; leaving train at terminal, sometimes dawdling to look at railroad equipment; walking by and sometimes entering fisheries museum; passing central town park where military band played during mid-day break; strolling by central shopping and business district, or, alternatively, passing fire station with horses at ease under suspended harnesses, ready to go, and continuing past centuries old town hall and other ancient buildings; exploration of fish market and fishing fleet; selection of fish; haggling about prices; purchase and return home.

I do not intend to claim that this was usual for a four-year-old boy on his own. Rather was it due to very unusual parents. The point is that such experiences were possible and permissible at that time while they would be utterly unthinkable today, due in no small measure to the hazards introduced by automobile traffic, among other causes.

When I was five we moved into the town itself, and I started to kindergarten and elementary school soon after. The days would go as follows: Off to school with other children joining the morning stream of white-collar pedestrian males ranging from clerks to shipowners, usually not walking with our elders but unavoidably exposed to overhearing adult conversation and observing adult behavior; soon passing a small botanical garden and greenhouse and a large building housing a substantial museum of natural history and a fair museum of history and ethnography; passing, also, a great architectural variety of residences; then the railroad terminal and the building opposite which houses the fisheries museum previously mentioned, and also, on higher floors, a museum of decorative arts, a small city art gallery and the exhibition halls of the art association; past the central park with the music stand to the school, which shared a block with the fire station, city prison and an historic but still functioning public building. These were the days of two work periods with a long mid-day break. During the break the morning route was reversed, with stops to listen to the military band, to pay visits to museums (in my case) and to seek other adventures. At this time the stream would include some women, and it would cross a flow of blue-collar workers moving in the other direction. In the afternoon the pedestrian procession would go back again, but now a considerable number of wives on errands of their own, starting out with, or more or less at the same time as their husbands, and proceeding to the same parts of town, sometimes accompanied by their children, there being no afternoon elementary school. When spending free time in our own neighborhood, I had only about 300 feet to walk to watch activities in a booming shipyard, about 1,000 feet farther along came the public aquarium; and immediately beyond that was the seawater moat protecting the naval station, where sticklebacks nested in the seaweeds; sculpins, gobies, and small flounders darted about and could be watched for hours. In another direction it was about 300 feet to ferry stairs where I could fish, about 600 feet to a large dock and coal depot, and many rocky, still-vacant lots to explore. There were also frequent visits, unaccompanied, back to the natural history and the history museum. This is actually only a very incomplete list of how things were around 1905-7.

The child's daily orbit has been even more sharply curtailed than its mobility. It seems the ideal of all urban designers to place the schools as near the homes as possible and with the simplest route between them, at the same time as urban growth is pushing residential precincts and school districts farther and farther away from the centers of history and of current affairs. A child's exposure to the life of the city two to four times daily has become a thing of the past.

Sixty years ago the orbits of men and women were also essentially the same. Automobile transportation has greatly increased the mobility of both, but has also separated the orbits of housewives from those of husbands and of women workers in business, industry, government and the professions. This reduction of urban experience shared in common by women and children also reduces their ability to communicate with each other.

The individualistic architectural diversity on the way to school has for most children been replaced by a walk, if not a ride, within the monotonous anonymity of new housing developments, and the twice daily autonomous plunge into the heartland of urbanity has become a rare and guided event during the early years of life."

2. "The Child in the City: Urbanity and the Urban Scene," A. E. Parr, LANDSCAPE, Spring, 1967

The mainstream concept places educational facilities directly in the forefront of daily community life—rather than isolated and sequestered behind the schoolyard fence.

One new town solution which epitomizes the mainstream concept is a linear town built along an Educational Concourse which directly integrates education with the daily life in the town. Along the concourse in Paul Kennon's project are distributed all the activities of the community—schools, shops, offices, industry, and housing.

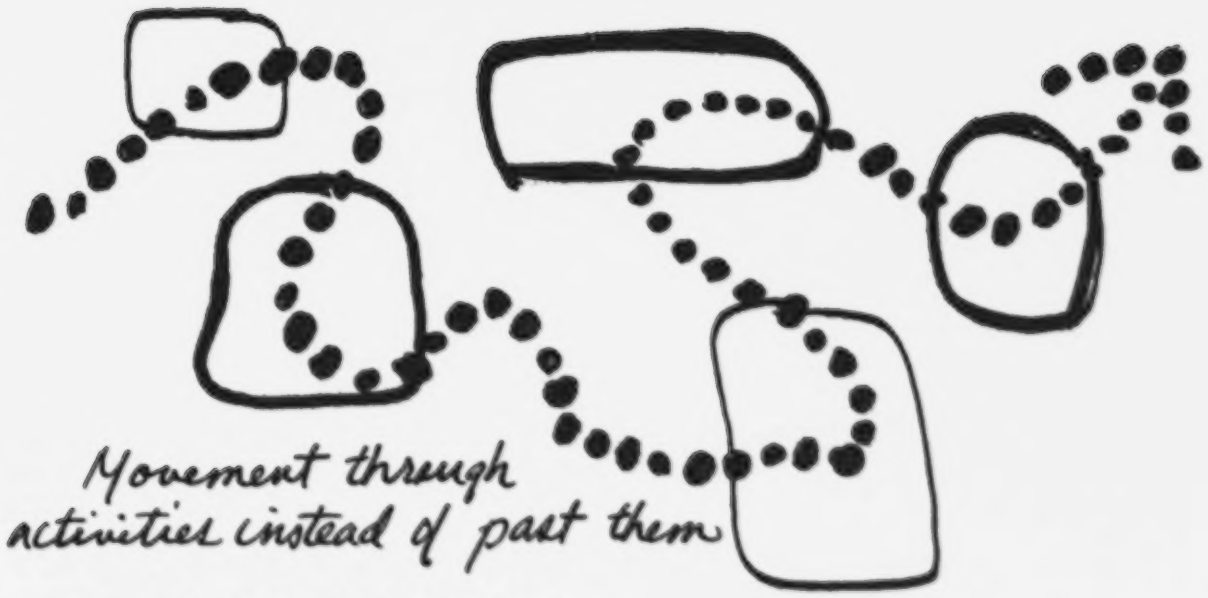
The concourse idea was proposed as the ordering element of the new town to create a confluence of people, ideas, and goods, as well as an opportunity for involvement with the life of the town. The concourse provides an intermix of activities and movement of people, an open space for people of all ages and backgrounds, and a place where each individual has a choice of moving along random or selected paths of learning experiences. Planned as a university town, the concourse concept erased all traditional distinctions of "town and gown," and created, instead, a "gown-town," because classroom walls and larger walls between the community and the academic way of life would not exist.

Schools are now serving as the generators of new towns. In California, for instance, where many new community colleges and state universities are being constructed, commerce, industry, and housing follows directly in the wake of construction. It is logical, then, to include all facilities in integrated planning for a new "gown town."

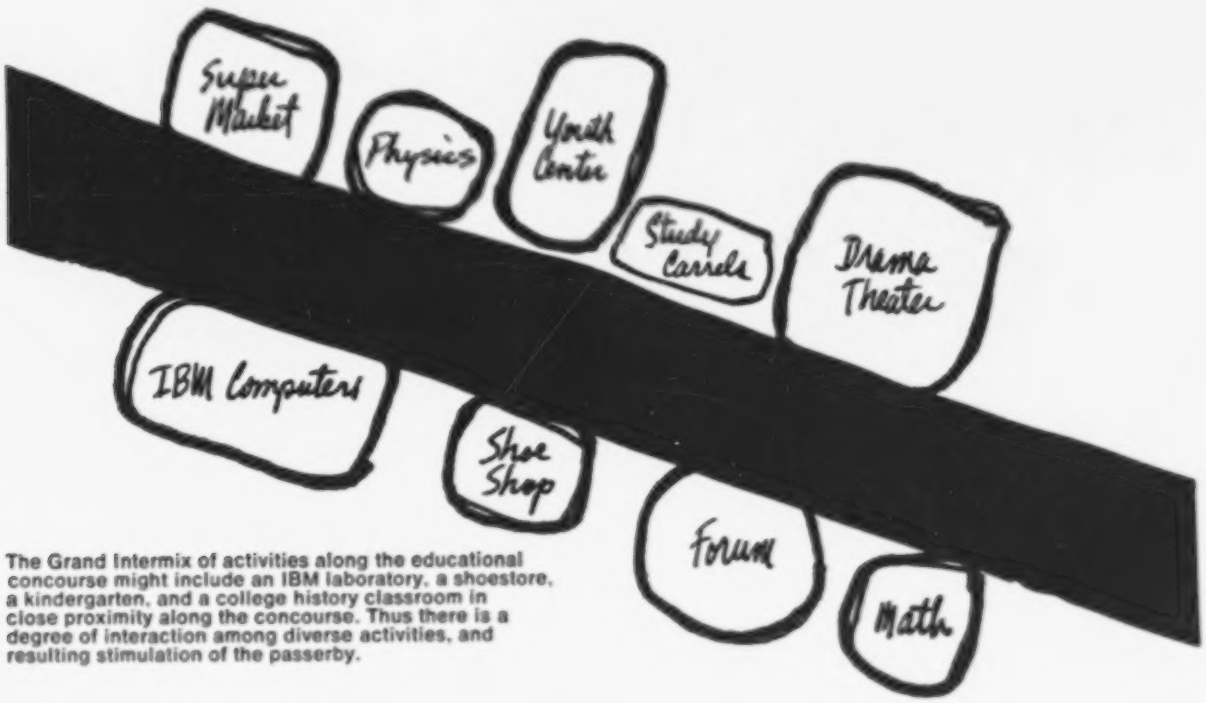
Such planning could eliminate alienation between town and gown and break down the educational, social, physical, psychological, cultural, economic, and political walls between student and resident. The concept attempts to reduce traditional tension between town and gown by focusing on common interests and obtaining the best education possible for each member of the community. The plan expresses the climate of the university and capitalizes upon the presence of a major educational facility in the community by using its human and physical resources, and utilizing the facilities of the university for recreational and cultural activities, for the benefit of community residents of every age.

Traditional alienation between town and gown is eradicated when a new town and a university are built integrally, and facilities for education and every other phase of human life are placed along a giant Educational Concourse. The flow of movement includes not only university students, but town residents of all ages.

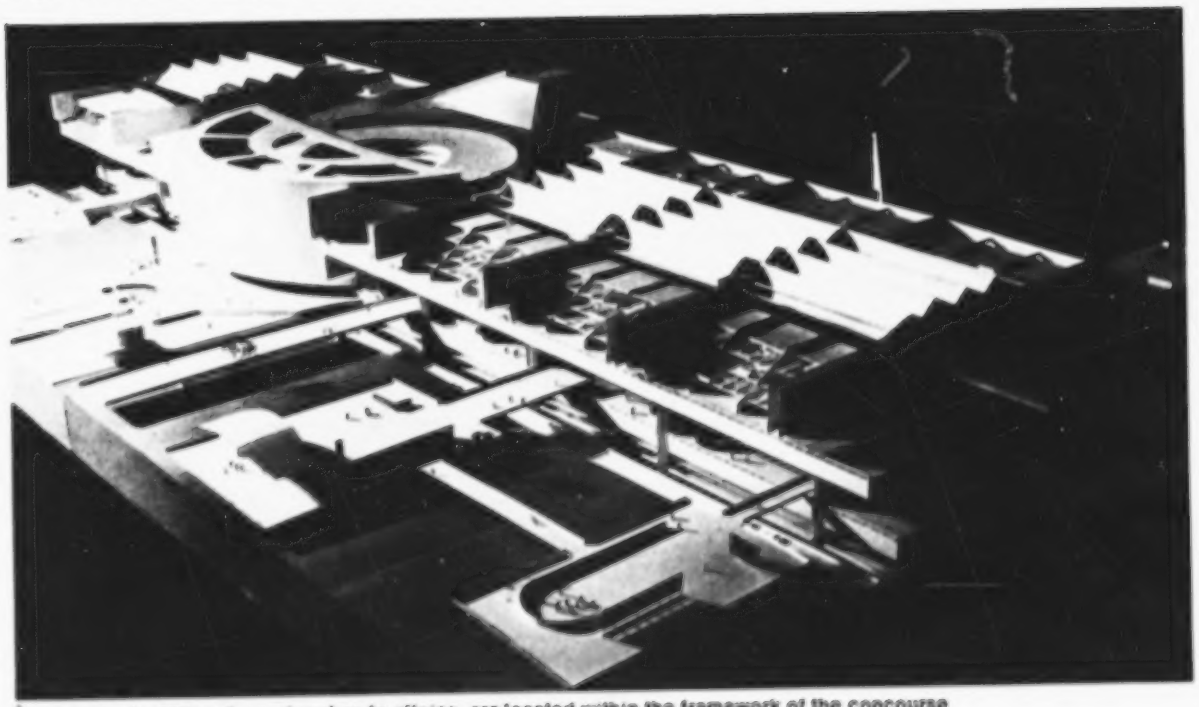
The emphasis is on cooperative planning between the university and the town, capturing the feeling of intense activity and movement from the very young to the senior citizen—all on their way to some purposeful activity outside the home, so that the town expresses education, including research and development, as its principal and most highly valued activity.



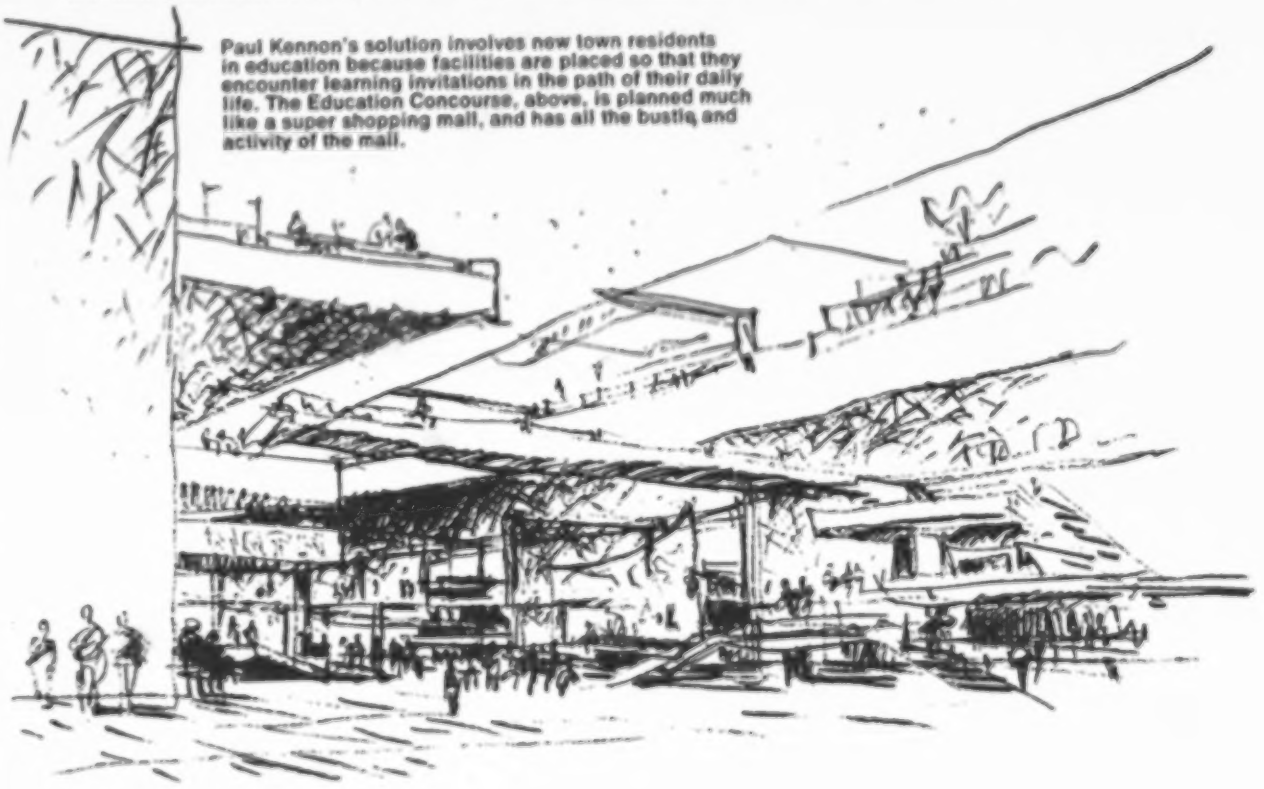
Educational facilities in the new town which architect Paul Kennon designed are located so that there is movement *through* them, rather than just past them. The town residents are thus included, and invited to join classes.



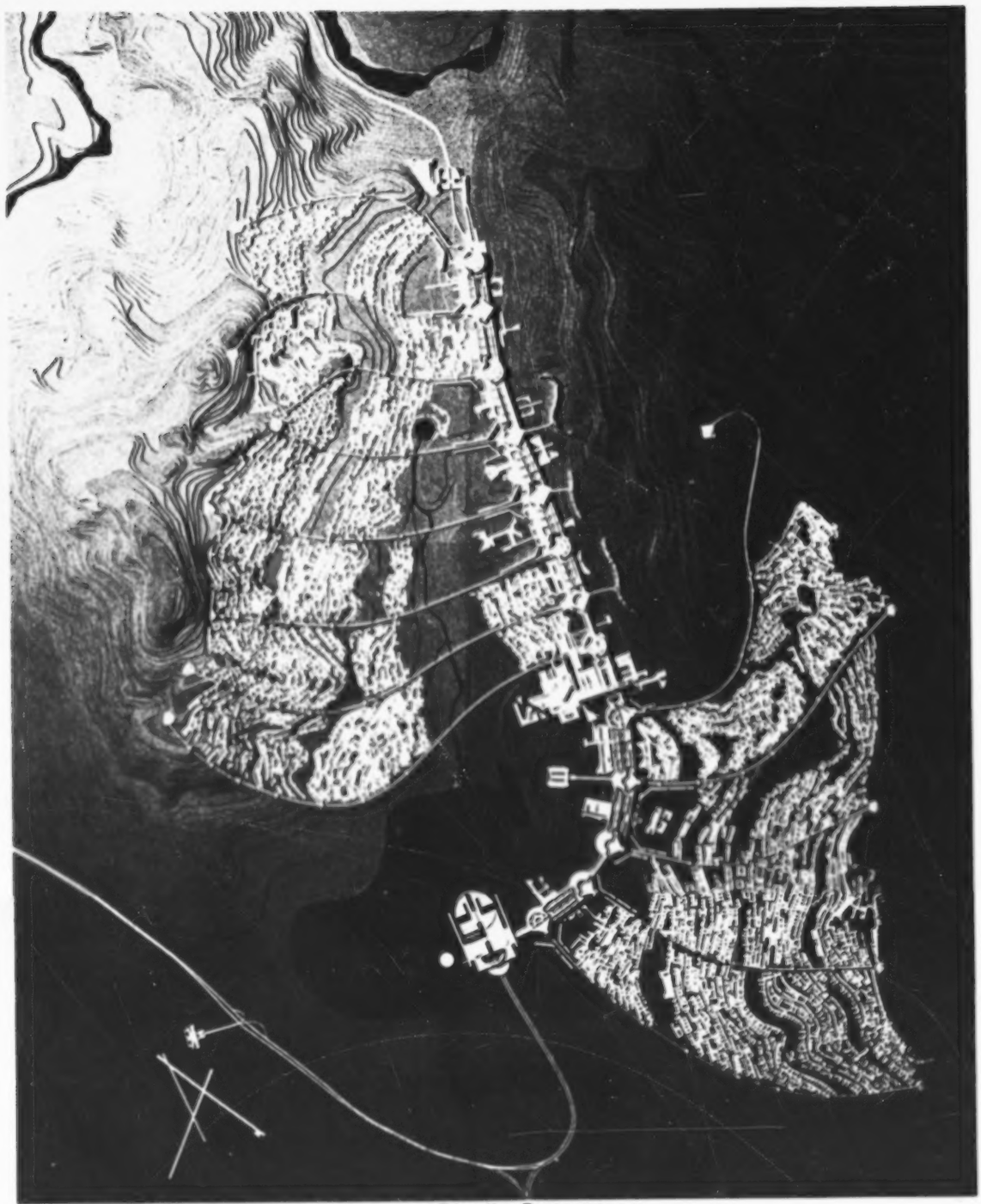
The Grand Intermix of activities along the educational concourse might include an IBM laboratory, a shoestore, a kindergarten, and a college history classroom in close proximity along the concourse. Thus there is a degree of interaction among diverse activities, and resulting stimulation of the passerby.



Community facilities, from churches to clinics, are located within the framework of the concourse



Paul Kennon's solution involves new town residents in education because facilities are placed so that they encounter learning invitations in the path of their daily life. The Education Concourse, above, is planned much like a super shopping mall, and has all the bustle and activity of the mall.



All segments of Valley's structure relate to the central Education Concourse

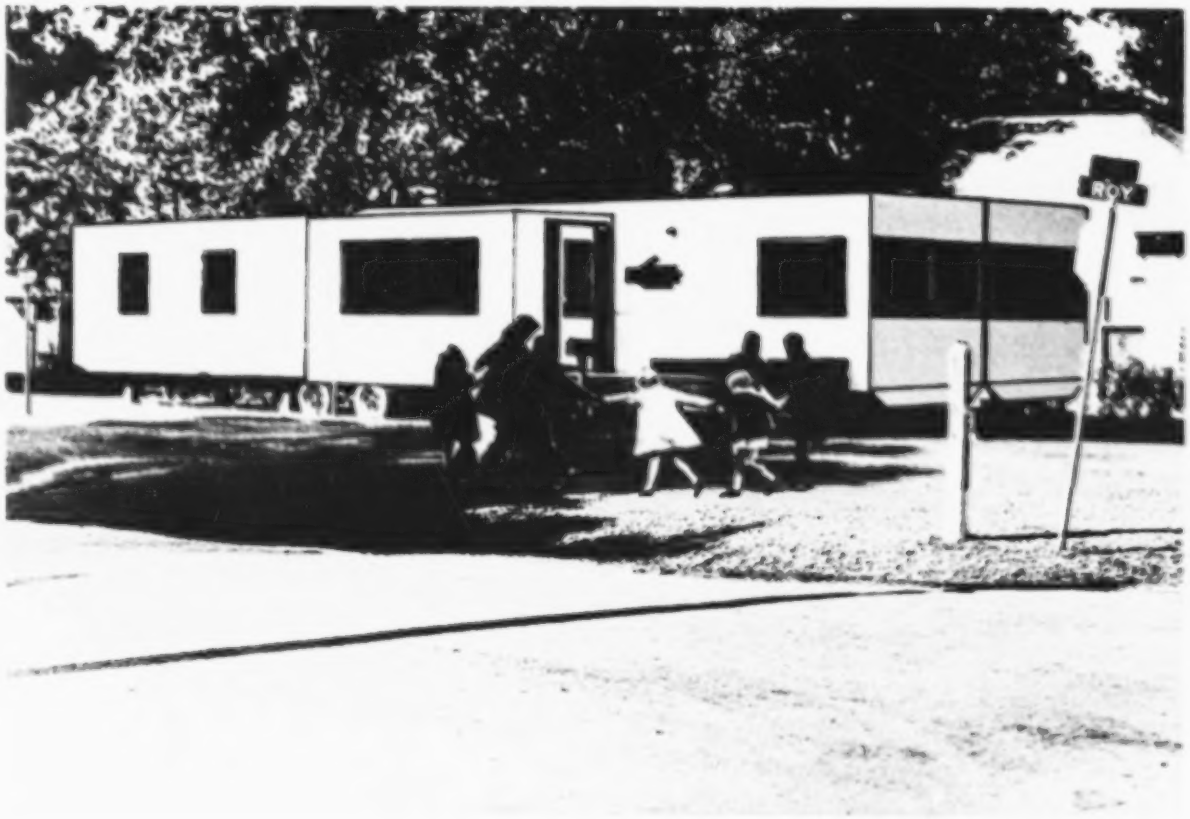
To boost learning experiences in depressed areas of cities, Architect Thomas Vreeland proposed a fluid system which was designed specifically to enter the daily life of the residents—directly in the decaying neighborhoods where they lived.

To bring facilities to the attention of the people, the symbol of the Open Hand was used, communicating to the people that education is helpful, is to be trusted, and that the facility displaying the hand welcomed the resident.

The Open Hand, in Vreeland's scheme, appeared on all manner of facilities used in everyday life. The program sought out the commonplace, the familiar and reliable facilities that the people were accustomed to viewing as they went about their daily rounds. Cigarette machines, telephone booths, drive-ins, all were pressed into service, identified with the Open Hand symbol, as tools for learning.

Education was thus able to enter day-to-day life as a familiar, useful, and easily acceptable part of the community. The general spirit of the scheme was to show the people that education had come down from its pedestal —as it must, if it is to cope with the new problems of the ghetto and urban chaos. Most important, the Open Hand communicates to the people that education is NOT aloof and worthy of mistrust.

The Open Hand symbol, placed on highly familiar objects within the community, leads and invites the residents to the educational facility.



43 Intermix/The Tower of Learning

As education assumes an increasingly important role, the facilities which house education will approach the scale of commercial buildings, and will be intermingled with them, rather than sequestered on neat, isolated campuses.

The image of the schoolhouse will then become that of a bold highrise structure similar to that of corporate headquartering, and located in the heart of the urban area, intermixed in the mainstream of life. The central location of education reflects the importance of providing education for all citizens in the new town designed by architect Charles Colbert.

History shows that men build to express the values they consider most important. Architect Colbert maintained that the headquartering for education must be as imposing as that of big business, to express the importance of education in the structure of the new town.

A commanding high-rise building proclaims the position of education in a new town designed by Charles Colbert. He proposed that facilities for education be given equal stature with those for business.

"The coupling of the ageless and yet desired with the possibilities of the future have been compared and hopefully melded"—Colbert.

The educational facilities for Robert Venturi's new town were based on a program prepared by Carol Lubin and Ronald Haase, which used libraries as the backbone of the educational system. Electronic technology was utilized to pipe information into many decentralized education nodes and education was available to every resident of a new town, on a 24-hour per day basis.

Communicating systems can enrich every area of life, and education thus can take place in the home, in the factory, in the neighborhood, anywhere.

In his scheme for a new town, Venturi placed educational facilities along a central strip which has all the conventional elements of existing American city landscapes.

The strip is lined with mini-structures easily adaptable to changing needs of the system, and is dotted with billboards and signs promoting education in the same manner in which commodities are promoted.

Robert Venturi's new town has four distinct facilities for the learner:

1. The Educational Service Station is located on street corners within individual neighborhoods, and is planned to serve clusters of about 40 houses. This "service station" has connections for television and other facilities to assist persons who wish to study outside of their home but do not wish to travel to one of the larger centers listed below. The service stations are open day and night.

A Meeting room
Up to 100 persons for block meetings, etc.

B Work room can be adapted for music practice or arts and crafts, etc.

C Lounge

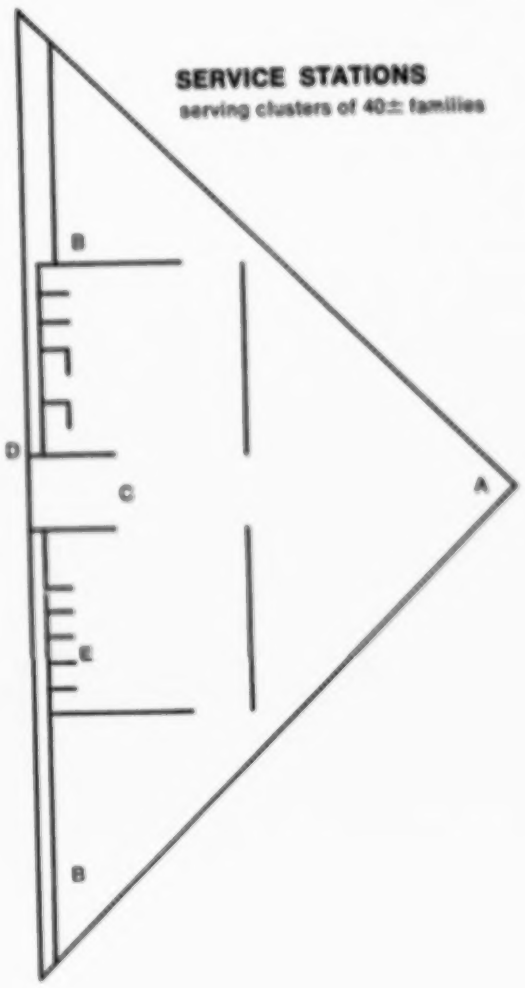
D Utility core

E Computer based learning carrels are located within utility core and can be coin operated

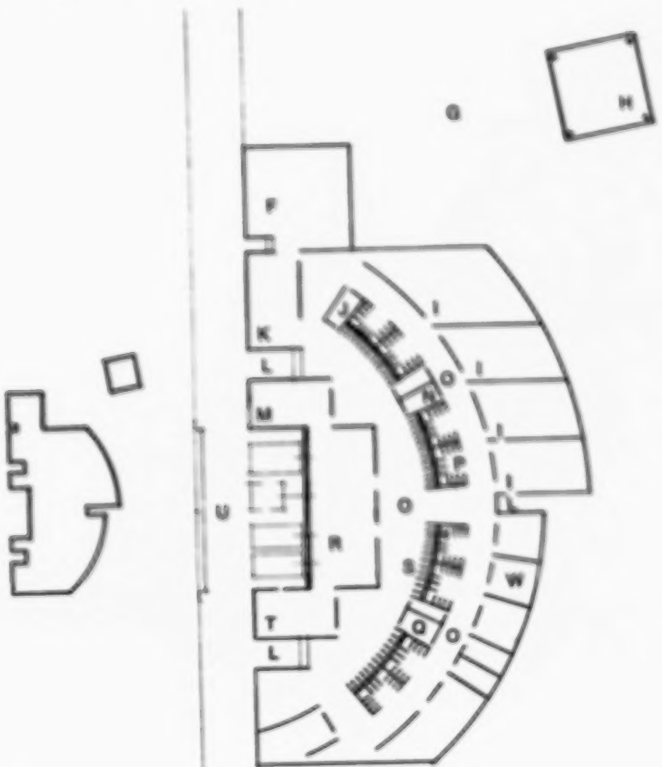
Facilities could be used at any hour by individuals or families who do not want to work by themselves in their own home and do not want to go to the neighborhood center for some reason.

Industrial service stations which are similar in program but less architectural are plugged within each plant.

Neighborhood service stations also contain child care facilities.



2. The Neighborhood Learning Resources Center, with facilities for non-graded education through the conventional boundaries of the second grade, is provided for each neighborhood of about 500 families.
The Center has facilities for adult classes, for community meetings, for health care extension programs, and for day and night care of children so that their parents may participate in programs of interest to them.



F Child care center
Day and night nursery facilities for a maximum of 12 small children

G Outdoor play area

H Semi-sheltered play pavillion

I Recreation and crafts areas

J TPC: Teachers' planning and conference room

K Serving kitchen
Food supplied from town LRC

L Entrance

M Adm.

N T.

O Gallery

P Medium alcoves

Q Big alcoves

R Resources center
Reading visual and auditory equipment areas contain spaces for the individual as well as the group

S Individual carrels for resource area to be used by adults as well as students

T Resource check-in area

U Plug-in capacity for mobile resources

V Computer-assisted learning carrels for 1 to 3 students

W Seminar type discussion spaces can also be used by the community for social, political, or religious assembly

NEIGHBORHOOD LEARNING RESOURCES CENTER

500 families/neighborhood
1500-2000 residents
150 children, grades N/K-2 (x, 75 simultaneous enrollment factor = 120±)

3. The Town Learning Resources Center, provided for each township of 12,000 residents, has facilities for ungraded learning in what would conventionally be grades three through eight. This Center also houses facilities for adult education, and has some facilities for younger age levels. In addition, there are extensive facilities for community recreation, entertainment, and for the arts.

A Dispensing kitchen
Distributes food down gallery to carrels which double as dining areas

B Cafeteria

C Adm

D Plug-in capacity for mobile resources

E TPC teachers' planning and conference room

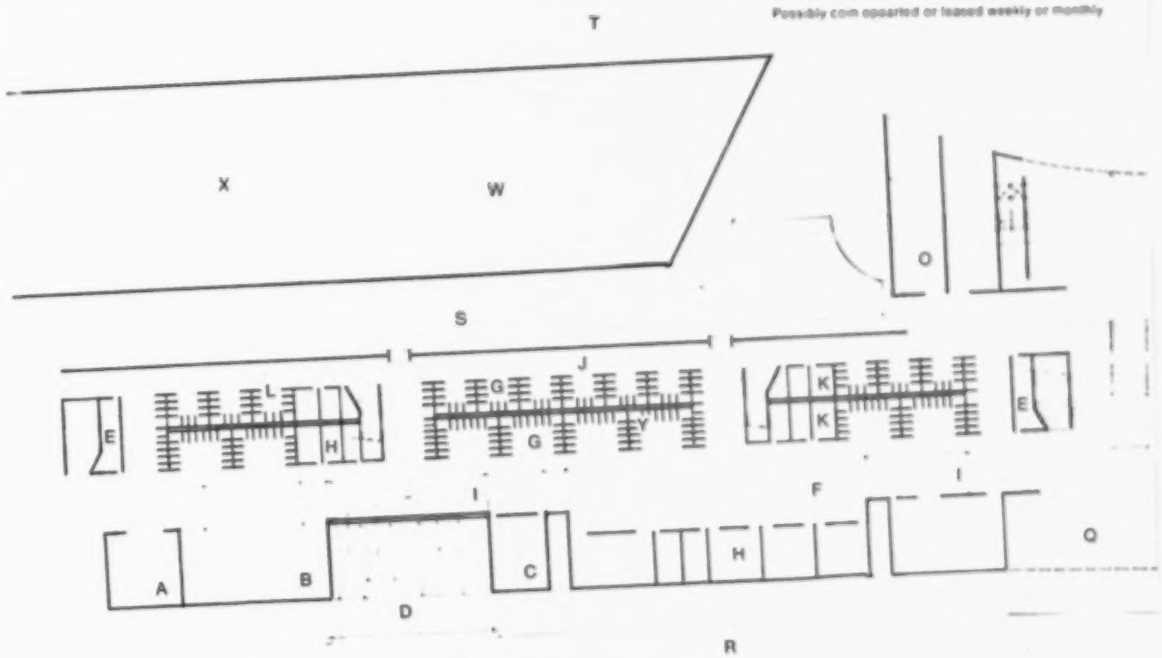
F Gallery

G Big and medium alcoves

H Niches

I Well

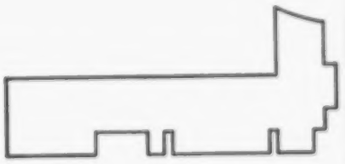
J Education arcade - open 24 hours computer assisted adult reading listening alcoves
Possibly com operated or leased weekly or monthly



TOWN LEARNING RESOURCES CENTER

3000 families
10,000 - 12,000 residents
1800 students, grades 3-8 (x.75 simultaneous enrollment factor = 1350)

32



K Toilet

L Computer assisted student reading - listening alcoves for 1, 2, or 3 students (50% of all learning spaces)
grouped to allow seminar discussions of 12-15 (25%)
or large groups of 50-60 (25%)

Computer devices
1) allow learning at student's own pace
2) provide access to vast information retrieval systems
3) reflect the thinking of programmers who are experts in their fields
4) possess inherent instantaneous self-correcting mechanisms that eliminate the 'homework return gap'

M To physical education center
health center and theater located
in town park and recreation area

N RESOURCE CENTER
(above)

Contains reception storage,
distribution and work space
for resource materials and device
(books, A.V., TV, and computer)

O Art & Science studios

P Active work areas
open to Main Street

Q Open

R Service, parking

S Service for shops

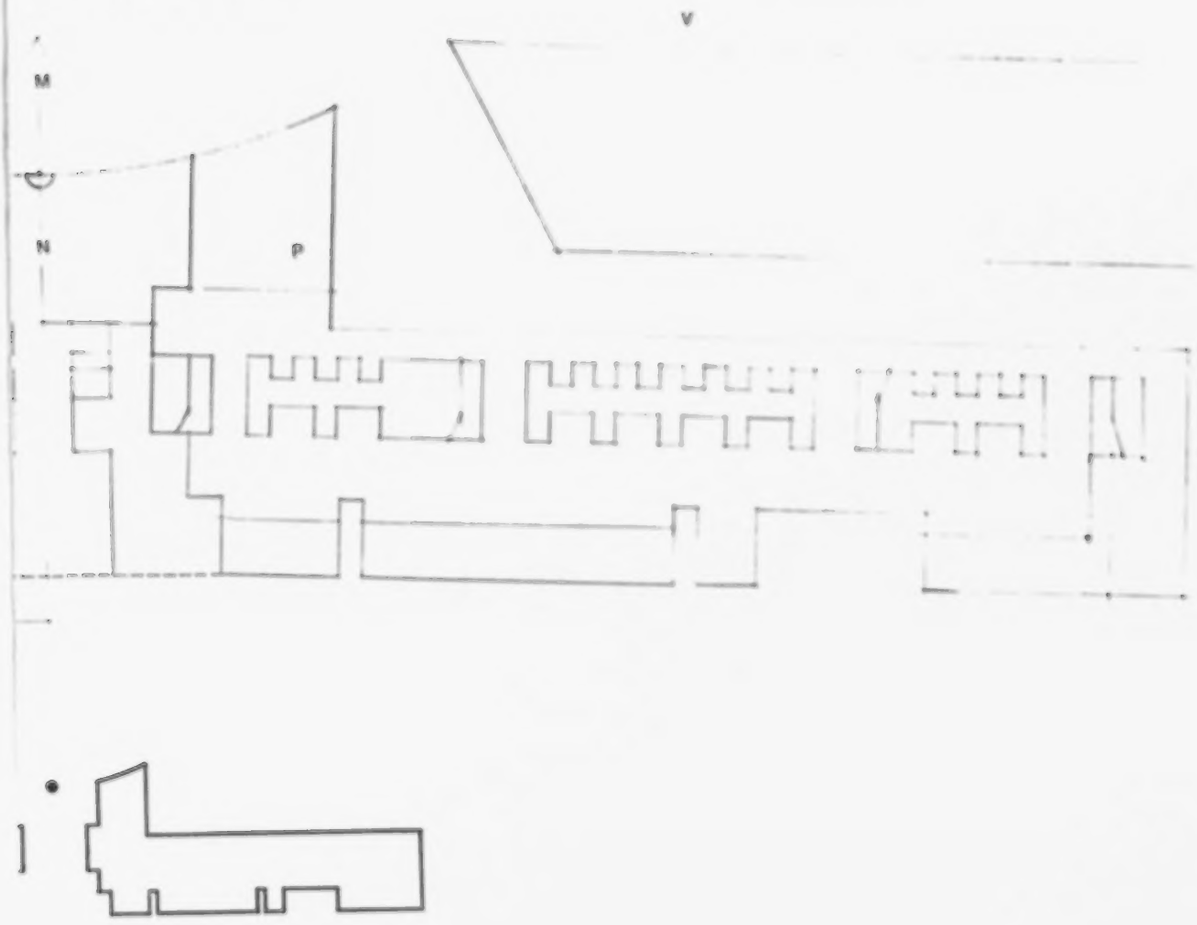
T Main Street
2 Lanes

U On street parking

W Small shops, accessible both sides

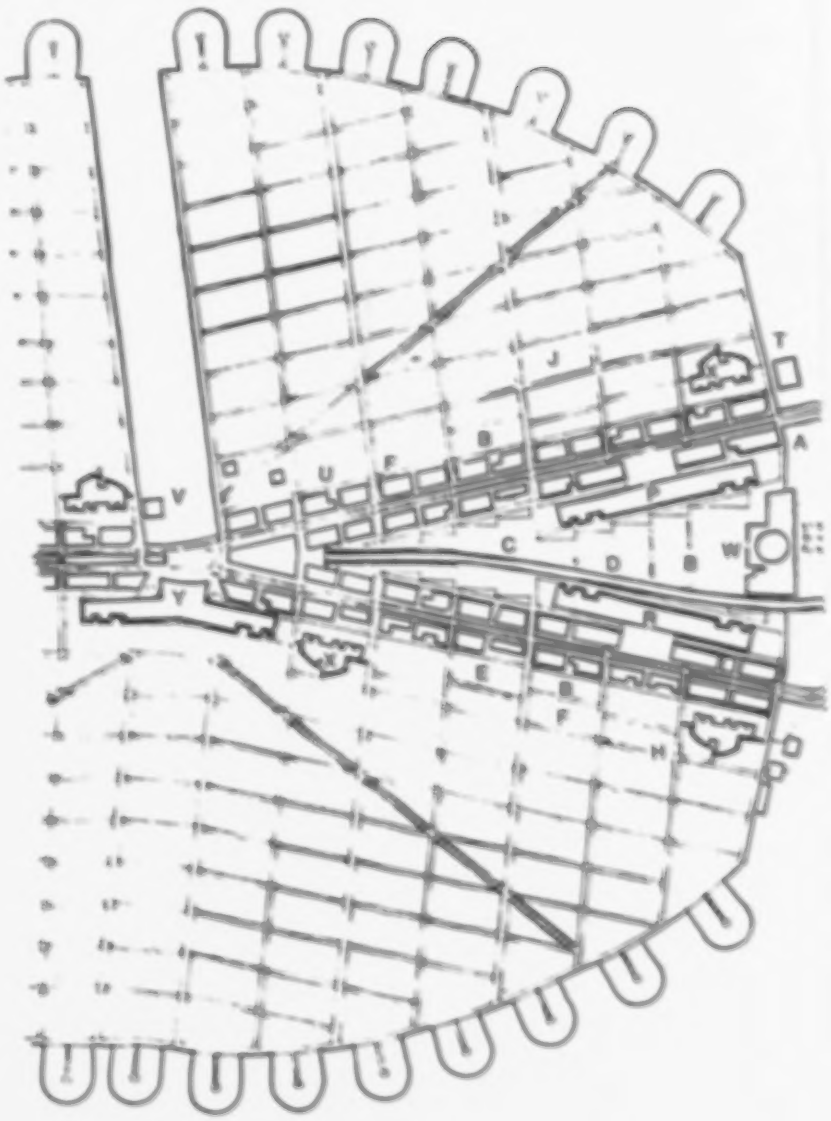
X Commercial strip

Y Additional carrels can accommodate
open enrollment to K-2, a facility
which serves as a hedge against
possible social or economic segregation
patterns, and as a specialized facility
for advanced or handicapped students
at these grade levels



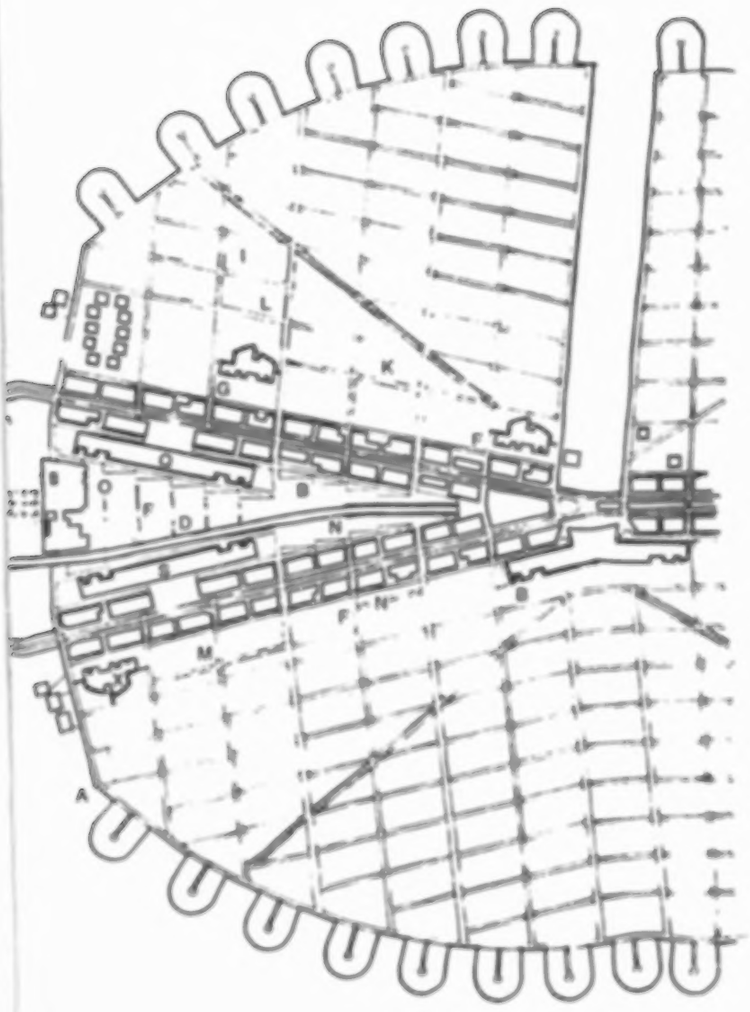
4. For the complete town—which is composed of eleven townships of about 20,000 residents each, there are two Senior Learning Resources Centers, which provide facilities for studies at the high school level. One Center specializes in arts and humanities, and the other in science and technology, yet students in either school may take courses from the other school by means of television.

In addition to the above facilities, there are also educational nodes located within industrial concerns so that employees may utilize work breaks to pursue their studies if they wish.



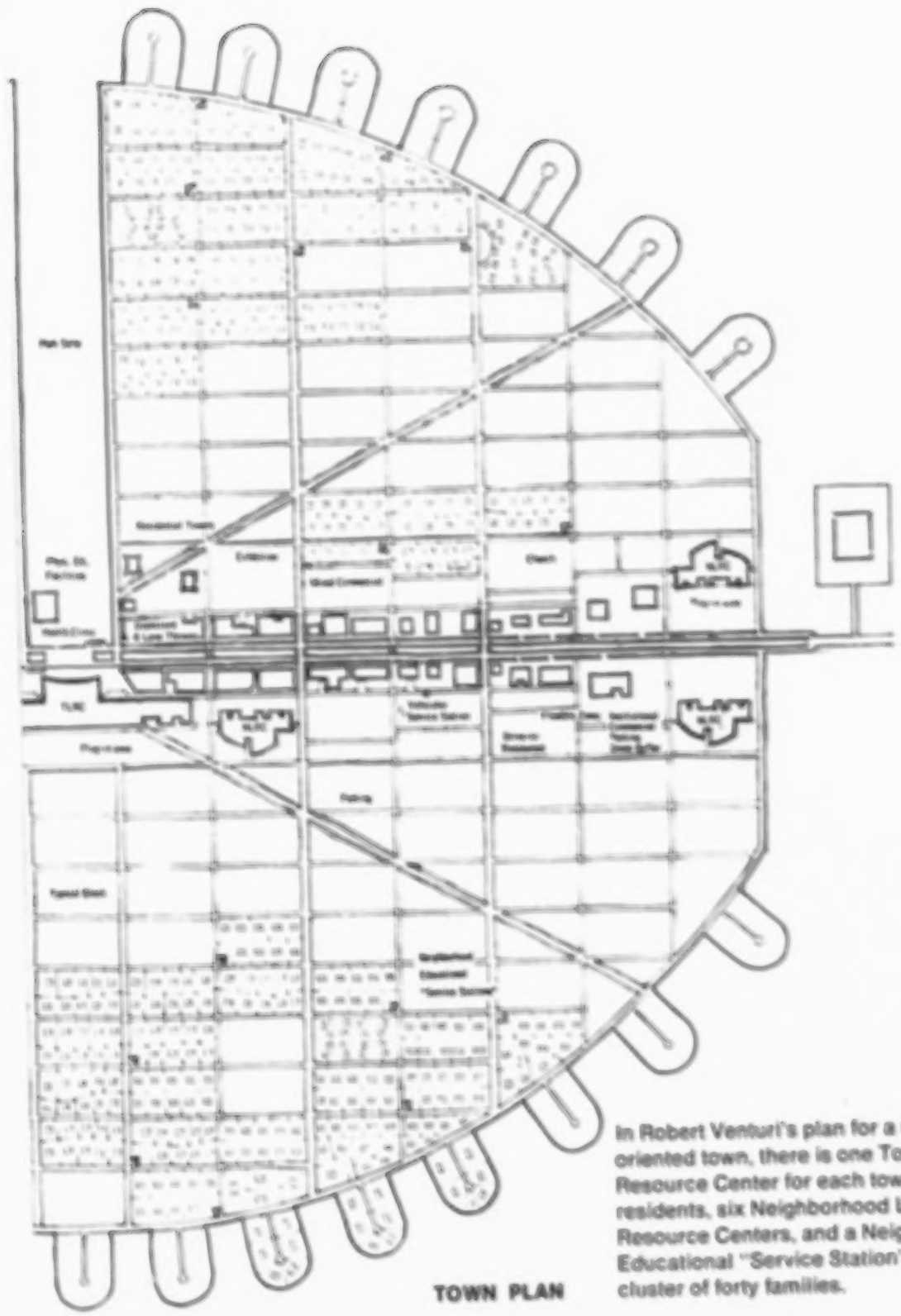
SENIOR LEARNING RESOURCES CENTER AND CITY FACILITIES
20,000 families
75,000 residents
16,000 students, grades 9-12 (x.75 simultaneous enrollment factor = 12,000 students) accommodated in two high schools of 6000 students each (one of which is shown above)

SCALE 2000



A. Town loop
B. Service road
C. 4 lane elevated thruway
D. Plug-in area
E. Parking
F. School busses
G. School busses from all four surrounding neighborhoods plus town
H. Flexible zone:
   Green buffer
   Commercial
   Institutional
   Parking
I. Typical sub-school for 1500 students divided into four houses of 375 students. The houses each have their own control and distribution area tied into central resources and devices.
J. A special theater seating groups of 250 to 1500 will be provided in each SLRC. In the science high school, the theater will be media-oriented, serving as a 'planetarium'. In the arts and humanities high school, the theater will be more performer oriented, serving as a concert hall and drama auditorium.
K. Commercial also including work areas and data processing centers where projects for science/math, arts/industry, and communications (music, drama, journalism, languages, etc.) can be VIEWED FROM THE STREET
L. Computer assister learning elements can receive information from programming centers located in large cities or major universities besides retrieval from the Media City Information Storage and Distribution Center.
M. Commercial with student commons facilities which include dining, social, exhibit, activity, and shopping spaces
N. Commercial
O. Civic and big commercial
P. Sub-school A
Q. Sub-school B
R. Sub-school C
S. Sub-school D
T. Physical education center
   Participation, rather than spectator oriented
U. Performing center
V. Motel
W. Theater
X. NLRC
Y. TLRC

50 (Continuation) Intermix/Education In The New Town: 1970

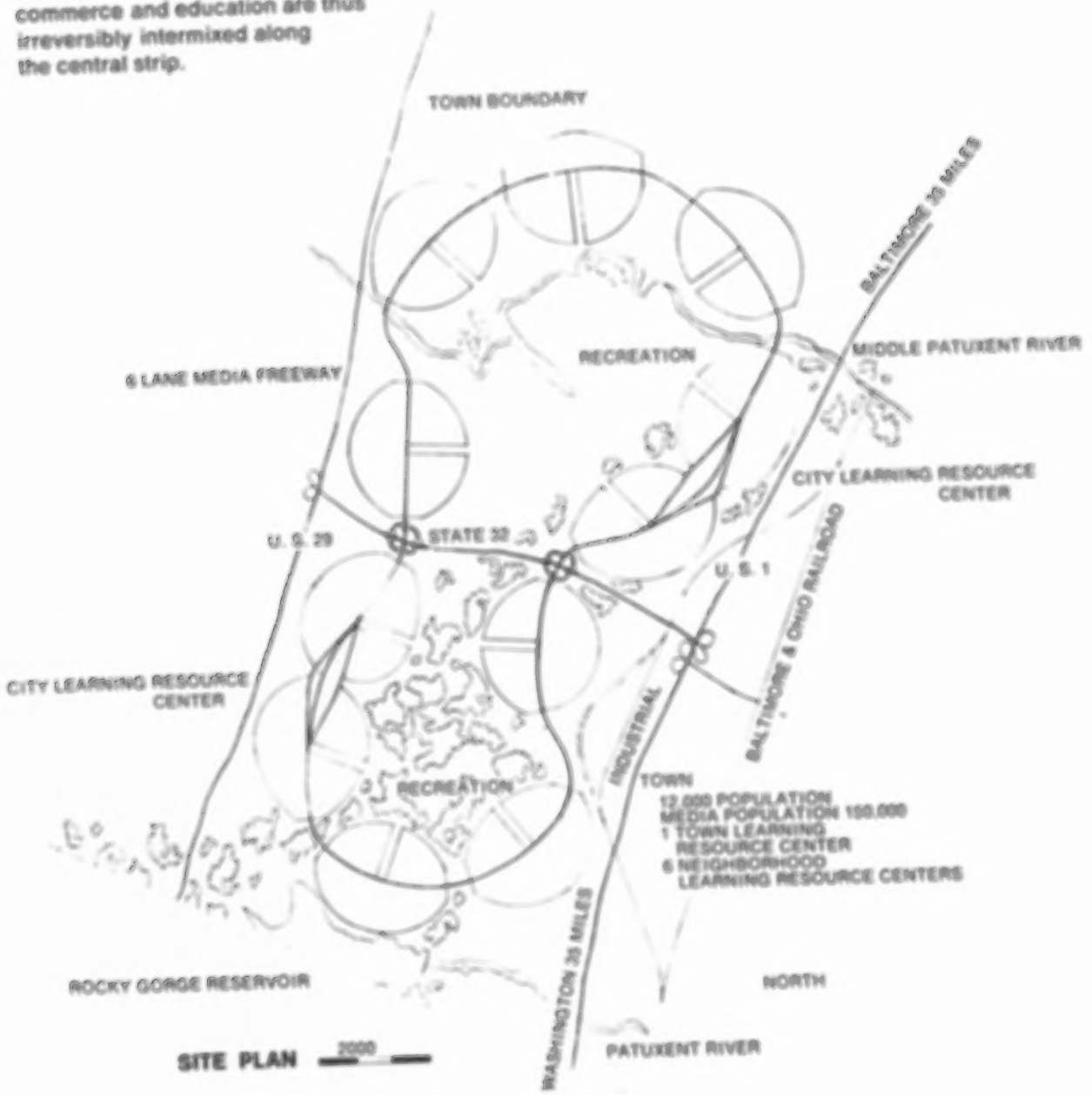


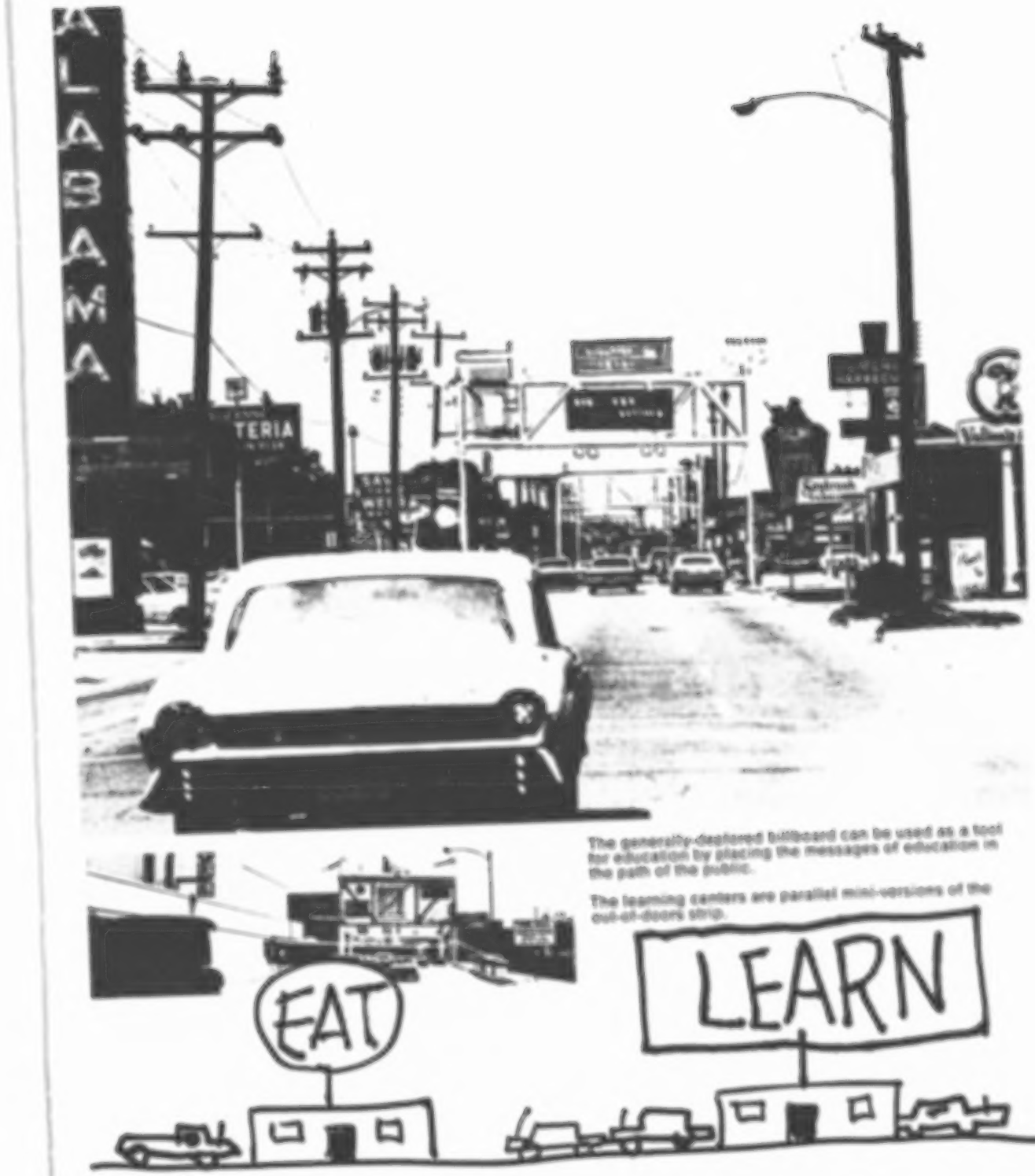
TOWN PLAN

In Robert Venturi's plan for a new education-oriented town, there is one Town Learning Resource Center for each township of 12,000 residents, six Neighborhood Learning Resource Centers, and a Neighborhood Educational "Service Station" for each cluster of forty families.

52 (Continuation) Intermix/Education in The New Town: 1970

The new town will accommodate some 120,000 residents. An interesting feature of the planning for this town is that the freeway system runs directly through the center of the town. Facilities for transportation, commerce and education are thus irreversibly intermixed along the central strip.



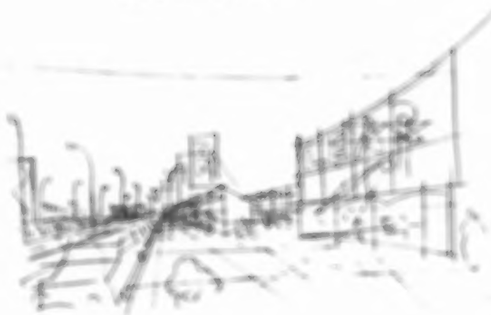


The generally-deplored billboard can be used as a tool for education by placing the messages of education in the path of the public.

The learning centers are parallel mini-versions of the out-of-doors strip.

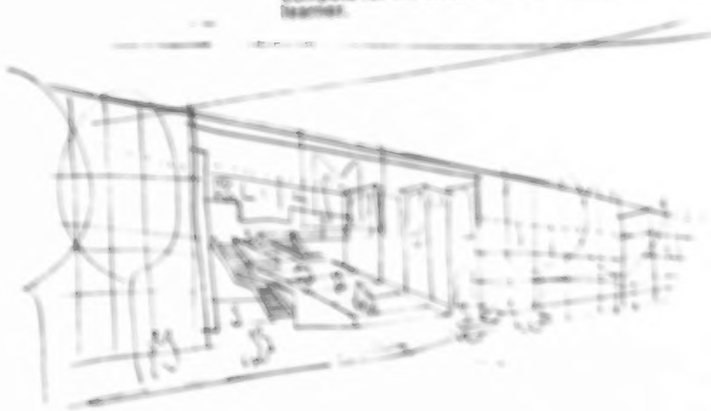
54 (Continuation) Intermix/Education In The New Town: 1970

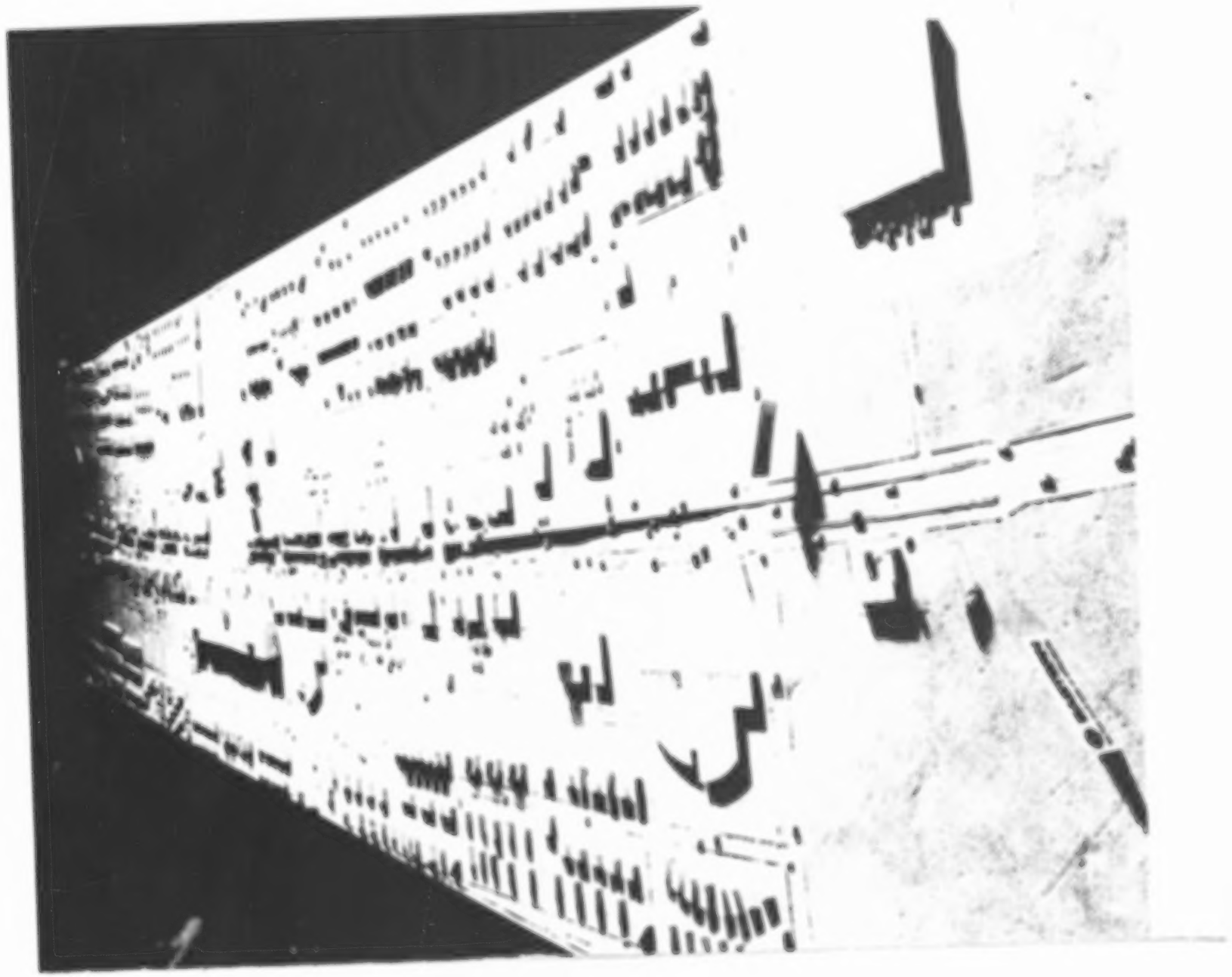
The learning centers are parallel mini-versions of the out-of-doors strip.



Learning centers are always connected because they are within the Educational-Commercial strip.

A commercial educational strip arrangement for a new town provides a constantly diverting route for the pedestrian and the motorist. Rather than denying the existence of and the necessity for the freeway and the attendant jumble of buildings and automobiles, architect Robert Venturi mingles education facilities directly with those for commerce—along a town-bisecting freeway—and creates a varied smorgasbord of attractions to compete for the attention of the pedestrian or motorist learner.





At the conclusion of the Rice Design Fete's twelve days of intensive research, many questions remained unanswered. *Among them: Can individual motivation and initiative for independent study be assumed? Can social involvement be achieved with a highly individualized program for education? In what manner may a system of study be provided for use in the home? Will industry assume its share of responsibility in proposed new education systems?*

We are convinced that answers to the foregoing may be found in the new towns of today and tomorrow. **It is our conviction, furthermore, based on findings of Rice Design Fete IV, that: New Towns need not be lettered to the drab conventions of traditional forms of education . . .**

New Towns can be living laboratories for advance in education. . .

New Towns can offer exciting prospects:

Education for LIFE . . .
Education for GROWTH . . .
Education which encompasses communities . . .
Spans lifetimes . . .
And betters each individual resident.

Frederick Gardner

New education, in brief, will be characterized by two major changes:

1. TECHNOLOGY: Proposals in the Design Fete relied upon educational technology, urban planning technology, building technology, and organizational technology. Every applicable form of technology was harnessed to provide total education for the resident of the new town.

It became evident that transportation will play a major role in education solutions for the future—as it did in solutions to New Town problems. New aspects involved, first, the transportation of the learners to the educational facility (as in the case of the drive-in information bank), and, second, the transportation of educational facilities to the people (as in the case of the traveling bus with its programmed courses.)

2. INTERMIX: As technology makes significant changes in education, it follows that new forms of schools will evolve. Education as formalized programs neatly docketed within set hours will be replaced by social and educational restructuring with facilities available on a 24-hour basis, on the street corner, in telephone booths, in the home, within industry, in libraries, in private automobiles.

The walls between learning and life will vanish.

And the schoolhouse will disappear—or linger as a memorial to pre-electronic learning.

mcannady

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